



CAETS Council Agenda

15 October 2020

Virtual Meeting: 1400-1645 (KRT)

- 1400 Welcome and Introductions Oh-Kyong Kwon
1. **Action:** Approval of Agenda Ruth David
Question: Do you accept the agenda as provided?
2. **Action:** Approval of Council Minutes of 27 June 2019 Ruth David
Question: Do you accept the minutes as provided?
3. Report from the 12 October 2020 Meeting of the Board Ruth David
- a. Information: 2019 Audit Committee Report
- b. Information: Approved 2021 Operating Budget
- c. Information: Conduct of Working Groups/Committees
4. Administrative Items Ruth David
- a. **Action:** Approval of 2021 Rotation Schedule
Question: Do you accept the 2021 Rotation Schedule?
- b. **Action:** Approval of 2021 Dues Schedule
Question: Do you accept the 2021 Dues Schedule?
- c. Information: Future CAETS Meeting Schedule
- i. 2021: Buenos Aires, Argentina – September 20-23
- ii. 2022: Paris, France – March 21-25
5. **Action:** Election of Board Members for 2021-2022 Ruth David
Question: Do you accept the slate of nominees for the Board?
- President-Elect: Pascal Viginier, France (NATF)
- Board Member: **Ulrich Wagner**, Germany (acatech)
- Board Member: Elisabeth Monard, Belgium (BACAS)
- Board Member: Rita Hofmann-Sievert, Switzerland (SATW)
- Board Member: Nasim Khan, Pakistan (PAE)
- 1420 6. Information: CAETS Strategic Plan Next Steps Tuula Teeri
- 1430 7. Information: CAETS 2021 Status Update Manuel Solanet
- 1440 8. Information: CAETS 2022 Status Update Gerard Creuzet
- 1450 9. Committee Report: Energy Chinho Park
- 1505 10. Committee Report: Communicating with the Public Hugh Bradlow
- a. **Action:** Communications Committee Proposal
Question: Do you accept the Committee proposal?



CAETS Council Agenda

- 1520 11. Working Group Report: Diversity and Inclusion David Thomlinson
- 1535 12. Working Group Report: Sustainable Development Goals David Thomlinson
- 1550 13. Working Group Report: Engineering Education Jesse Zhu
- a. **Action:** International Conference (virtual)
- Question: Do you accept CAETS co-sponsorship?**
- 1605 14. Committee Report: COVID-19 Youn Hee Choi

EXECUTIVE SESSION: Member Academies Only

- 1620 15. Membership Application – Ireland Ruth David
- a. Application Summary
- b. Virtual Trip Report Agenda & Summary Tuula Teeri
- c. **Action:** Approval of Membership Application
- Question: Do you accept the Trip Committee recommendation?**
- d. **Action:** Approval of initial Dues
- Question: Do you accept the recommended dues?**
- 1635 16. New Business Ruth David
17. Recognition of CAETS Service Oh-Kyong Kwon
- Tuula Teeri, Officer (2018-2020), CAETS President 2019, Sweden
- Hugh Bradlow, Board (2019-2020), Australia
- Xiaohong LI, Board (2019-2020), China
- Panu Nykanen, Board (2019-2020), Finland
- Sanak Mishra, Board (2019-2020), India
- 1645 18. Adjourn Oh-Kyong Kwon



CAETS Council Minutes

27 June 2019

IVA Conference Center

Stockholm, Sweden

1. Welcome and Introductions

CAETS President Tuula Teeri opened the Council Meeting and welcomed all participants. She extended a special welcome to Jameel Ahmad Khan, representing the Pakistan Academy of Engineering, a newly elected member of CAETS, as well as representatives from New Zealand, Nigeria, and Serbia, whose membership applications were to be considered during the meeting.

2. Approval of Agenda

The meeting agenda was approved as presented.

3. Approval of Council Minutes of 13 September 2018

The minutes from September 2018 were approved as presented.

4. CAETS 2020 Update

Inkyu Lee, NAEK, provided an update on plans underway for CAETS 2020, which will be held at the Four Seasons Hotel in Seoul, South Korea on 22-25 June. The theme of the technical symposium will be 'Smart Society.' Registration will be available approximately March 2020.

5. CAETS 2021 Status Update

Manuel Solanet, ANI, provided an update on plans for CAETS 2021, which will be held in Buenos Aires, Argentina from 20-23 September. The theme of the technical symposium will be 'The Future of Energy'. A video introducing Argentina as well as a summary of the planned lectures for the symposium were shared with the Council.

6. Report from the 24 June 2019 Meeting of the Board

a. 2018 Audit Committee Report

The Secretary/Treasurer reported that the 2018 Financial Audit was completed without issue and that the final report was posted on the website.

b. 2020 Operating Budget

The Secretary/Treasurer reported that the Board had approved the 2020 Operating Budget; the Council concurred.

The Secretary/Treasurer also summarized Board discussions regarding the CAETS website, Discussion Groups, CAETS Statements, and CAETS Strategy.

It was noted that individual member academies will be invited to provide content that will be shared via the public portion of the website under a 'Resources' tab that will be created, and that over the coming months a forum capability will be established in the members-only portion to facilitate collaboration in support of CAETS activities.

Additionally, a procedure for the initiation and organization of CAETS Discussion Groups/Committees will be developed for initial consideration by the Board.

For CAETS 2019, a two-part approach will be employed for post-meeting communications. Shortly after the event, IVA will prepare and post a 'Reflections' paper that summarizes key themes and topics from the technical symposium; this material will also be featured on the CAETS website. Over the succeeding months, IVA will draft a formal statement for Council consideration; Council members will be invited to identify a topic that they believe should be included.

The Board also appointed a small group that will develop a five-year CAETS Strategic Plan with three components: Organizing CAETS to develop and execute a plan; membership development; and strategies to achieve CAETS objectives (as delineated in the Bylaws). Members include: Tuula Teeri, Oh-Kyong Kwon, Sanak Mishra, Hugh Bradlow, David Thomlinson, and Friedrich Wu. Secretary/Treasurer Ruth David will support the effort. The intent is to provide a draft for Council review/comment well in advance of the June 2020 meeting so a final document is available for Council consideration during the annual meeting.

7. Report of the Secretary/Treasurer

a. Rotation Schedule

An updated Rotation Schedule was provided with the meeting materials and posted on the website; it was noted that changes were necessary because two academies opted not to nominate Board Members for the 2020-2021 cycle. Japan and Mexico agreed to nominate candidates to fill those slots. Academies that will be invited to nominate members for the 2021-2022 cycle include Germany, Belgium, Denmark, and Pakistan.

b. 2021 Dues Schedule

It was reported that the dues schedule will remain unchanged for 2021.

c. Future CAETS Meeting Schedule (meeting updates will be provided via the website)

i. CAETS 2020: Seoul, Korea – June 22-25

ii. CAETS 2021: Buenos Aires, Argentina – September 20-23

iii. CAETS 2022: Paris, France – date TBD but likely in March

8. Administrative Actions

a. Approval of Rotation Schedule – Members approved the schedule.

b. Approval of 2021 Dues Schedule – Members approved the schedule

c. Election of Board Members for 2020-2021 – The Council elected Manuel Solanet, Argentina, as President-Elect, and new Board Members Hideaki Koizumi, Japan; David Thomlinson, United Kingdom; Jose Albarran, Mexico; and Peter Mascher, Canada.

9. Report from the Energy Committee

NAEK reported that the 2018 Energy Committee Report has not yet been finalized; acatech is leading this effort. A new project on Clean Energy Technologies is underway and will include

CAETS Council Minutes

consideration of how best to integrate intermittent renewable sources into legacy power grids. The related report will be published in digital version only.

10. Discussion Group Report: Engineering Education

Jesse Zhu summarized key points discussed by the group, including specific opportunities for CAETS, and provided a tentative action plan to develop a draft CAETS statement on Engineering Education for consideration in 2020. Presentation charts are available on the CAETS website.

11. Discussion Group Report: Communicating with the Public

Hugh Bradlow reported establishment of a governance structure to include himself as Chair and Lucas Noldus as Vice Chair of a CAETS Communicating with the Public Committee. The group discussed key audiences and outputs, processes in use by individual academies, and opportunities to strengthen CAETS communications, both internally and externally. Presentation charts are available on the CAETS website.

12. Discussion Group Report: Diversity and Inclusion

David Thomlinson summarized the group discussion and advocated that Diversity and Inclusion be established as a core objective for CAETS; it was agreed that this topic would be deferred for consideration during the broader strategic plan formulation. The group intends to gather information regarding efforts relating to Diversity and Inclusion within individual member academies to inform a path forward.

13. Discussion Group Report: Sustainable Development Goals (SDGs)

David Thomlinson observed that engineering is at the heart of the Sustainable Development Goals, which are applicable to developed and developing countries alike, yet few engineering academies are explicitly linking their efforts to the SDGs. He will draft a paper based on the group's discussion and propose next steps for CAETS.

The CAETS meeting adjourned and reconvened in closed session following a break.

14. Membership Application: New Zealand

Ruth David provided a brief summary of the Visiting Committee's trip report, which was included in full with Council Materials; she noted that the Committee recommended election of the Royal Society Te Aparangi as a member of CAETS.

a. Action: Call for vote

Election of the Royal Society Te Aparangi was unanimously approved by CAETS delegates in attendance. Membership is effective upon receipt of a \$2000 contribution to CAETS reserves; initial dues were established at \$1030 beginning in 2020.

15. Membership Application: Nigeria

Ruth David provided a brief summary of the Visiting Committee's trip report, which was included in full with Council Materials; she noted that the Committee recommended election of the Nigerian Academy of Engineering as a member of CAETS.

a. Action: Call for vote

Election of the Nigerian Academy of Engineering was unanimously approved by CAETS delegates in attendance. Membership is effective upon receipt of a \$2000 contribution to CAETS reserves; initial dues were established at \$1030 beginning in 2020.

16. Membership Application: Serbia

Ruth David provided a brief summary of the Visiting Committee's trip report, which was included in full with Council Materials; she noted that the Committee recommended election of the Academy of Engineering Sciences of Serbia as a member of CAETS.

a. Action: Call for vote

Election of the Academy of Engineering Sciences of Serbia was unanimously approved by CAETS delegates in attendance. Membership is effective upon receipt of a \$2000 contribution to CAETS reserves; initial dues were established at \$1030 beginning in 2020.

17. New Business

No new business was discussed.

18. Presentation of Certificates in Recognition of CAETS Service

President Teeri presented certificates of appreciation to the following individuals:

Lucio Caceres, ANIU (President-Elect, President (2018), Past-President)

Roger McCarthy, US NAE (Board Member 2018-2019)

Lucas Noldus, AcTI.nl (Board Member 2018-2019)

Stane Pejovik, IAS (Board Member 2018-2019)

Istvan Kralik HAE (Board Member 2018-2019)

The Council meeting was adjourned at 4:55 pm.



*International Council of Academies of
Engineering and Technological Sciences, Inc.*

2020 President
Oh-Kyong Kwon, NAEK, Korea

2020 President Elect
Manuel Solanet, xxx, Argentina

2020 Past President
Tuula Teeri, IVA, Sweden

Secretary/Treasurer
Ruth David, NAE, US
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CAETS Records
National Academy of Engineering
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www.caets.org

CAETS Member Academies

National Academy of Engineering, Argentina
Australian Academy of Technology and Engineering
Royal Belgian Academy Council of Applied Sciences
Canadian Academy of Engineering
Chinese Academy of Engineering
Croatian Academy of Engineering
Engineering Academy of Czech Republic
Danish Academy of Technical Sciences
Technology Academy Finland
National Academy of Technologies of France
German Academy of Science and Engineering
Hungarian Academy of Engineering
Indian National Academy of Engineering
The Engineering Academy of Japan
The National Academy of Engineering of Korea
Academy of Engineering, Mexico
Netherlands Academy of Technology and Innovation
Royal Society Te Aparangi, New Zealand
National Academy of Engineering, Nigeria
Norwegian Academy of Technological Sciences
Pakistan Academy of Engineering
Academy of Engineering Sciences of Serbia
Slovenian Academy of Engineering
South African Academy of Engineering
Royal Academy of Engineering, Spain
Royal Swedish Academy of Engineering Sciences;
Swiss Academy of Engineering Sciences
Royal Academy of Engineering, United Kingdom
National Academy of Engineering, USA
National Academy of Engineering, Uruguay

CAETS President O-Kyong Kwon
National Academy of Engineering of Korea
Korea Technology Center
Republic of Korea

Dear President Kwon:

We were selected by our respective academies, the Royal Academy of Engineering of the United Kingdom and the National Academy of Engineering (NAE) of the United States to serve 2-year terms on the Audit Committee, in accordance with CAETS Operating Procedures.

The CAETS Secretary/Treasurer prepared and submitted the enclosed two-page statement, CAETS Financial Summary FY2019, dated 14 March 2020. We have reviewed the relevant supporting account statements and vouchers and believe this enclosed statement accurately reflects the state of CAETS financial affairs as of 31 December 2019.

Submitted by

David Thomlinson
RAEng International Secretary

Al Romig
NAE Executive Director

Mary Kutruff
NAE Financial Officer

Enclosure: 2019 Financial Statements

Fiscal year 2019

1/1/2019- 12/31/2019

OPERATIONS

	FY2017	FY2018	FY2019	FY2019 ²	FY2020 ¹
Receipts	actual	actual	actual	budget	budget
Dues	84,494.20	80,811.00	81,175.00	83,430.00	84,460.00
Expenses					
Communications	-	510.79	84.99	2,500.00	2,500.00
Equipment	-	-	-	200.00	-
Legal-Prof. Fees	1,113.00	162.00	80.00	500.00	300.00
Management Fee	44,000.00	44,000.00	50,000.00	50,000.00	50,000.00
Meetings	127.07	50.71	-	200.00	300.00
Postage, Delivery	33.30	183.12	-	300.00	200.00
Printing	-	-	-	500.00	360.00
Supplies	243.15	88.73	122.36	230.00	300.00
Travel	15,409.09	20,791.15	18,268.79	25,000.00	25,000.00
Strategy Implementation	-	2,887.70	-	4,000.00	5,500.00
Total Expenses	60,925.61	68,674.20	68,556.14	83,430.00	84,460.00

¹Approved by Board and Council during annual meetings June 2019; dues budget reflects previously approved 3% increase and addition of Pakistan (elected in 2018).

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.

ACTIVITIES AND CHANGES IN RESERVE FUNDS

Balance From 12/31/2018	286,269.83
Revenue	
Dues Received	81,175.00
Reserve Fund Contributions	6,000.00
	<u>87,175.00</u>
Expenses	
Operating Expenses	68,556.14
Reserve Fund Expenses	41,635.17
	<u>110,191.31</u>
	(23,016.31)
Balance 12/31/2019	263,253.52

Statement of Financial Position
12/31/2019

ASSETS

Bank of America Account Balance 12/31/19	<u>273,774.87</u>
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Total Assets	273,774.87
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LIABILITIES

Deferred Revenue from Prepaid Dues	10,234.00
Checks Issued but Not Cleared	-
Due to Secretary/Treasurer	287.35
On Account for Members	<u>-</u>

Total Liabilities	10,521.35
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NET ASSETS	<u>263,253.52</u>
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Total Liabilities and Net Assets	273,774.87
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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 12/31/2018	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
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¹ 2017 Expense not reimbursed in 2018 (See 2017 Financial Statements)

3.b Proposed 2021 Operating Budget

2021 Proposed Operating Budget

	FY2018	FY2019	FY2020 ²	FY2021
Receipts	actual	actual	budget	budget
Dues ³	80,811.00	81,175.00	84,460.00	87,550.00
Expenses				proposed
Communications	510.79		1,500.00	
Website		84.99	1,000.00	500.00
Equipment	-		-	
Legal-Prof. Fees	162.00	80.00	300.00	300.00
Management Fee ¹	44,000.00	50,000.00	50,000.00	50,000.00
Meetings	50.71		300.00	200.00
Postage, Delivery	183.12		200.00	100.00
Printing	-		360.00	200.00
Supplies	88.73	122.36	300.00	200.00
Travel	20,791.15	18,268.79	25,000.00	25,000.00
Strategy Implementation ⁴	2,887.70		5,500.00	5,500.00
Total Expenses	68,674.20	68,556.14	84,460.00	82,000.00

¹Management Fee increase recommended by Board and approved by Council during 2018 Annual Meetings.

²2020 Budget approved by Board during 2019 Annual Meetings.

³Dues Payable in 2020 were increased by \$3090 with the election of New Zealand, Nigeria, and Serbia (not reflected in Dues budget amount (total payable is \$87,550). Dues received shortfall (year-to-date) is largely attributable to 3 member academies who have not yet paid 2020 dues; the EAC adjustment assumes those dues will be paid.

⁴Activities endorsed by Board that are in support of implementation of CAETS Strategy.

CAETS Rotation Schedule - 2021 - 2022

Member Academy	Date Elected	Annual Meeting Host	Officer			Board			
			President Elect	President	Past President	Board	2020	2021	2022
Korea (NAEK)	2000	2020	2019	2020	2021	2019	Prof. Kwon Oh-Kyong	Prof. Kwon Oh-Kyong	
Argentina (ANI)	1999	2021	2020	2021	2022	2020	Manuel A. Solanet	Manuel A. Solanet	Manuel A. Solanet
France (NATF)	1989	2022	2021	2022	2023	2021		Pascal Viginier	Pascal Viginier
Croatia (HATZ)	2000	2023	2022	2023	2024	2017			NOM (Pres-Elect)
Finland (TAF)	1989	2024	2023	2024	2025	2019	Dr. Panu Nykanen		
Czech Republic (EA CR)	1999	2025	2024	2025	2026	2015	DEFERRED	DEFERRED	
USA (NAE)	1978 (F)	2026	2025	2026	2027	2018			
Norway (NTVA)	1990	2027				2015	DEFERRED	DEFERRED	NOM (2022-2023)
Germany (acatech)	2005					2017		Reinhard Huttli	Reinhard Huttli
Australia (ATSE)	1978 (F)	2005				2019	Prof. Hugh Bradlow		
Belgium (BACAS)	1990	2006				2016		Elisabeth Monard	Elisabeth Monard
Japan (EAJ)	1990	2007				2020	Hideaki Koizumi	Hideaki Koizumi	
Netherlands (AcTI.nl)	1993	2008				2018			
Slovenia (IAS)	2000					2018			
South Africa (SAAE)	2009					2017			NOM (2022-2023)
Canada (CAE)	1991	2009				2020	Peter Mascher	Peter Mascher	
Denmark (ATV)	1987	2010				2016		DEFERRED	NOM (2022-2023)
Mexico (AI)	1978 (F)	2011				2020	Jose Albarran	Jose Albarran	
Switzerland (SATW)	1988	2012				2017		Rita Hofmann	Rita Hofmann
Hungary (HAE)	1995	2013				2018			
China (CAE)	1997	2014				2019	Prof. LI Xiaohong		
India (INAE)	1999	2015				2019	Dr. Sanak Mishra		
United Kingdom (RAEng)	1978 (F)	2016			2017	2020	David Thomlinson	David Thomlinson	
Spain (RAI)	1999	2017	2016	2017	2018	2018			
Pakistan (PAE)	2018					2021		Nasim A. Khan	Nasim A. Khan
Uruguay (ANIU)	2000	2018	2017	2018	2019	2019			
New Zealand	2019								NOM (2022-2023)
Serbia (AEISS)	2019								
Nigeria (NAE)	2019								
Sweden (IVA)	1978 (F)	2019	2018	2019	2020	2018	Tuula Teeri		
Secretary/Treasurer	2017						Ruth David	Ruth David	Ruth David

CAETS Dues Schedule

Country	Academy		2018	2019	2020	2021	2022
Argentina	Academia Nacional de Ingeniería	ANI	1000	1030	1030	1030	1030
Australia	Australian Academy of Technological Sciences and Engineering	ATSE	6000	6180	6180	6180	6180
Belgium	Royal Belgium Academy of Applied Sciences	BACAS	2000	2060	2060	2060	2060
Canada	Canadian Academy of Engineering	CAE	3000	3090	3090	3090	3090
China	Chinese Academy of Engineering	CAE	6000	6180	6180	6180	6180
Croatia	Croatian Academy of Engineering	HATZ	1000	1030	1030	1030	1030
Czech Republic	Engineering Academy of the Czech Republic	EA CR	1000	1030	1030	1030	1030
Denmark	Danish Academy of Technical Sciences	ATV	3000	3090	3090	3090	3090
Finland	Technology Academy Finland	TAF	3000	3090	3090	3090	3090
France	National Academy of Technologies of France	NATF	3000	3090	3090	3090	3090
Germany	German Academy of Science and Engineering	acatech	3000	3090	3090	3090	3090
Hungary	Hungarian Academy of Engineering	HAE	1000	1030	1030	1030	1030
India	Indian National Academy of Engineering	INAE	6000	6180	6180	6180	6180
Japan	The Engineering Academy of Japan	EAJ	6000	6180	6180	6180	6180
Korea	The National Academy of Engineering of Korea	NAEK	3000	3090	3090	3090	3090
Mexico	Academy of Engineering, Mexico	AI	3000	3090	3090	3090	3090
Netherlands	Netherlands Academy of Technology and Innovation	AcT.nl	2000	2060	2060	2060	2060
New Zealand	Royal Society Te Aparangi				1030	1030	1030
Nigeria	Nigerian Academy of Engineering	NAE			1030	1030	1030
Norway	Norwegian Academy of Technological Sciences	NTVA	3000	3090	3090	3090	3090
Pakistan	Pakistan Academy of Engineering	PAE		1030	1030	1030	1030
Serbia	Academy of Engineering Sciences of Serbia	AESS			1030	1030	1030
Slovenia	Slovenian Academy of Engineering	IAS	1000	1030	1030	1030	1030
South Africa	South African Academy of Engineering	SAAE	1000	1030	1030	1030	1030
Spain	Royal Academy of Engineering, Spain	RAI	3000	3090	3090	3090	3090
Sweden	Royal Swedish Academy of Engineering Sciences	IVA	3000	3090	3090	3090	3090
Switzerland	Swiss Academy of Engineering Sciences	SATW	3000	3090	3090	3090	3090
United Kingdom	Royal Academy of Engineering, UK	RAEng	6000	6180	6180	6180	6180
United States	National Academy of Engineering, US	NAE	6000	6180	6180	6180	6180
Uruguay	National Academy of Engineering of Uruguay	ANIU	2000	2060	2060	2060	2060
Total Dues Payable			81000	84460	87550	87550	87550

2019: Includes 3% increase and 1 New Member

2020: Includes 3 New Members

9/13/2020

CAETS President-Elect

Pascal Viginier

President of NATF

Pascal Viginier, 62 years old, has been elected as president of the French National Academy of Tehnology as of January the 1st, 2019 for 2 years, renewable.

He is an engineer, as graduate of Ecole Polytechnique and Telecom Paris, both now founders of the new Institut Polytechnique de Paris.

His career is focused on telecommunications in Orange Group, where he was Group R&D EVP an then Group Chief Information Officer.

He was appointed 3 years ago advisor to Orange Chairman and CEO, leading customized high level consulting.



Prof. Dr. Dr. h.c. Reinhard F. J. Hüttl

*Scientific Executive Director and Chairman of the Board, Helmholtz Centre Potsdam – GFZ German Research Centre for Geosciences
Vice President, National Academy of Science and Engineering (acatech), Germany*

Prof. Dr. Dr. h.c. Reinhard Hüttl is Scientific Executive Director and Chairman of the Board at the Helmholtz Centre Potsdam – GFZ German Research Centre for Geosciences. He is Vice President of the National Academy of Science and Engineering (acatech).

Reinhard Hüttl studied Forest and Soil Sciences at the Albert-Ludwigs-University (ALU), Freiburg, Germany and at the Oregon State University, Corvallis, USA and holds the Chair of Soil Protection and Recultivation at the Brandenburg University of Technology (BTU), Cottbus-Senftenberg since 1993.

Before joining the BTU, Reinhard Hüttl was Assistant Professor in Geobotany at the University of Hawaii in Honolulu, USA and, prior to that, Head of the International Research Department at the mining company “Kali und Salz AG” in the BASF Group in Kassel (1986 to 1992).

Reinhard Hüttl has also held several advisory positions. From 1995 to 2000 he was member of the German Government's Council of Experts for Environmental Questions, and from 2000 to 2006 both member and chairman of the German Government's Scientific Commission of the Science Council. He was also member of the German Government's Ethics Commission on the Safe and Secure Provision of Energy which was established in March 2011 and presented its final conclusions in July 2011. Reinhard Hüttl is member of the BioEconomyCouncil which he chaired from January 2009 to May 2012. This council is an independent advisory body to the German government for all matters relating to the bioeconomy including biotechnology and biomass production. He is currently member of the Scientific Advisory Board on Forest Policy of the Federal Ministry of Food and Agriculture and Chairman of the Board of Trustees of the German Science Academies' project "Energy Systems of the Future". Reinhard F. Hüttl is also Chairman of Euro-CASE since May 2013, following his previous position as Vice Chairman.

He is member of a number of national and international Academies including the Academy of Geosciences and Geotechnologies, Academia Europaea, the Swiss Academy of Technical Sciences, the Austrian Academy of Sciences and the Royal Swedish Academy of Agriculture and Forestry.

Reinhard Hüttl received an honorary doctorate from the University of Vienna in 2004 and was conferred with the Cross of Merit, First Class of the Federal Republic of Germany in July 2008.

CURRICULUM VITAE

Elisabeth Monard

Summary

Elisabeth Monard is director of the Class Technical Sciences of the Royal Flemish Academy of Belgium for Science and the Arts (KVAB). She was trained as a civil engineer (applied chemistry) and holds a PhD in Applied Sciences from the Katholieke Universiteit Leuven (KULeuven), Belgium.

Elisabeth Monard began her professional career as assistant professor at the Katholieke Universiteit Leuven. She held a position as engineering director at the Federal Department of Public Health in the division Radiation Protection (1982 - 1988). And from 1989 until 2005 she was the secretary of the Flemish Science Policy Council. As Secretary General she led during 10 years (2005-2015) the Research Foundation Flanders (FWO), the independent funding agency for basic and strategic research.

Born Riemst, 12 December 1949

Married

Three children

Belgian nationality

Address Kastanjelaan 3
 3001 Leuven-Heverlee
 Belgium
 tel. +32 16 40 37 70
 email: empmonard@gmail.com

Function Director Class Technical Sciences, Royal Flemish Academy of Belgium for Science and the Arts (KVAB).

Education

- Civil Engineer (applied chemistry), K.U.Leuven, 1973
- PhD in Applied Sciences, K.U.Leuven, 1980

Carreer

1973 – 1980	Assistant professor KULeuven, faculty of applied sciences, Fysico-chemical Laboratory (Prof. A. Neyens)
1980 – 1981	Scientific Officer at the “Instituut voor Aanmoediging van het Wetenschappelijk Onderzoek in Nijverheid en Landbouw” (IWONL), Brussel
1982 – 1988	Engineering director at the Federal Department of Public Health in the division of Radiation Protection
1988 - 2005	Secretary of the “Flemish Science Policy Council”
2005 - 2015	Secretary General FWO (Research Foundation – Flanders)
2012 - ...	Member Class Technical Sciences, Royal Flemish Academy of Belgium for Science and the Arts (KVAB)
2013 - ...	Chair School Board of the Free Primary School Terbank-Egenhoven in Leuven
2016 – 2017	Chair NVAO assessment panel for the universities UGent, KULeuven en UHasselt
2016 - 2017	Chair workgroup “Art and Science”, BOZAR, Brussels
2016 - ...	Member Board of Directors University Hospital Leuven (UZ Leuven)
2016 ...	Member Board of Directors “Z.org KU Leuven vzw”
2017 - ...	Chair Reflection Group Art, Science and Technology, KVAB
2018 -...	Member Board KVAB
2019 - ...	Director Class Technical Sciences, KVAB
2019 -...	Honorary professor of the Faculty of Engineering Science, KU Leuven.

Publications

Science and Technology Policy

- Dirk Van Dyck, Elisabeth Monard, Sylvia Wenmackers e.a., Onderzoeker-gedreven wetenschap. Analyse van de situatie in Vlaanderen, KVAB Standpunt 59, 2018.
- E. Monard, Waarheen met het Vlaams Wetenschapsbeleid? – in Mee met Morgen, Royal Flemish Academy of Belgium for Science and the Arts, Academia Press, 2013

- E. Monard, A fertile research frontier - Public Science Review European Science & Technology, 2011
- E. Monard, The Flemish way forward - Public Science Review European Union, 21, 2011
- E. Monard, Investeren in wetenschappelijk onderzoek is investeren in de toekomst – THEMA 3-10, 2010
- E. Monard, Career strategies for Young scientists (XXIV) – Labtimes 5, 2010
- E. Monard, Speculate to accumulate - Public Service Review European Union 20, 2010
- E. Monard, By the numbers – Belgium - Nature Vol. 467, 2010 (Interview)
- E. Monard, Towards a further internationalisation of basic research promotion - Belgian Research in Europe, 2009
- E. Smits, T. Vincent, E. Raticx, K. Debackere, E. Monard, D. Raspoet, K. Vinck, Technology and Innovation in Flanders, Foresight Brief No. 098 - EFMN, 2007
- E. Smits, B. Van Looy, K. Debackere en E. Monard., 'Five years of regional technology foresight: the Flemish experience', Management Jaarboek 2006, Vlaamse Management Associatie
- Smits, E., Van Looy, B., Debackere, K., Monard, E. (2006). Five years of regional technology foresight. The Flemish experience. Veille Stratégique Scientifique et Technologique. Séminaire Veille Stratégique Scientifique & Technologique. Lille (France), 16-17 January 2006.
- Smits, E., Van Looy, B., Debackere, K., Monard, E., Thoen, V., Ratinckx, E., Raspoet, D., Vinck, K. (2006). Regional technology foresight Flanders 2015: Expert validated priority setting on technology and innovation within 6 strategic clusters in Flanders (Belgium). Second International Seville Seminar on Future-Oriented Technology Analysis. Sevilla (Spain), Sep. 28-29.
- E. Monard, “Bedrijven en onderzoeksinstellingen stimuleren wetenschappelijk talent”, in Delta nr. 7 (september 2005)
- R. Dillemans en E. Monard, “Wetenschappelijk Onderzoek en cultuur”, in Wegwijs Cultuur, januari 2005
- E. Monard en D. Raspoet, “Verkennen om te kiezen”, in Delta, nr. 4 , december 2004
- D. Raspoet en E. Monard, “Universitair Onderzoek in Beweging, verslag workshop VRWB”, Universiteit en Beleid, 12^e jg. nr. 4, 14 juli 1998
- E. Monard, V. De Samblanx en L. Verstraete, “Buitenlandse vorsers aan de Vlaamse universiteiten”, Universiteit en Beleid, 12^e jg. nr. 3, 30 april 1998
- E. Monard, “De Universitaire Beurssystemen voor Doctorandi - advies van de Vlaamse Raad voor Wetenschapsbeleid”, Universiteit en Beleid, 12^e jg., nr. 2, 17 februari 1998
- E. Monard, “Het Vlaamse Wetenschapsbeleid en de VRWB”, in HERMAN, Universitaire Pers Leuven, 1998
- J. Roos en E. Monard, “Wetenschapsbeleid in Vlaanderen”, Verhandelingen van de Koninklijke Academie voor Geneeskunde van België, LIV nr. 6, 1992, blz. 611-630
- E. Monard, “Wetenschapsbeleid in Vlaanderen”, GENT, Verslagboek van het Nederlands-Vlaams colloquium ter afsluiting van het actieprogramma GENT, 23 juni 1992, Maastricht.
- Th. Peeters en E. Monard, “Wetenschapsbeleid tussen Hamer en Aambeeld”, bouwstenen van de Vlaamse Autonomie, Vriendenboek Etienne De Ryck, 1990
- E. Monard, Rubriek VRWB, Universiteit en Beleid, vanaf 1989 tot en met 2002

Training supervisor

- D. Raspoet o.l.v. E. Monard, “O&O-bestedingen van de Vlaamse universiteiten – Analyse” (juni 2002) – VRWB-Studiereeks 3

- K. Vercoutere o.l.v. E. Monard, 'Wetenschappelijk onderzoek en de genderproblematiek' (juni 2002) – VRWB-Studiereeks 4

Surface science

- E. Monard, H. Van Hove, A. Neyens, Proceedings of the Fourth International Conference on the Solid Surface and Third European Conference on Surface science, Cannes, 1980
- E. Monard, H. Van Hove, A. Neyens, 'Le Vide', 185, suppl., 1977, 395-400
- E. Monard, 'Oppervlaktekarakterisering van extrinsiek gestabiliseerde CdSe', doctoraatsthesis Toegepaste Wetenschappen, 1980, K.U.Leuven
- E. Monard, "Adsorptie van methanol, aceton, en methyleenchloride op actieve kool", eindwerk burgerlijk scheikundig ingenieur, 1973, K.U.Leuven

Collaboration:

- FWO Jaarboeken 2005-2010
- Vlaams indicatorenboek Wetenschap, Innovatie en Technologie, uitgaven 1999, 2001, 2003, 2005, 2007, 2009, 2011, 2013.
- Kleurrijk Vlaanderen, "Op naar de top. Technologie en Innovatie in Vlaanderen", juni 2003
- Vlaamse bijdrage voor de Wereldcommissie inzake de Sociale Dimensie van de Globalisering, 2002 (A fair globalization: creating opportunities for all)
www.ilo.org/public/english/wcsdg/index.htm,
www.ilo.org/public/english/wcsdg/consulta/flemish/index.htm
- CEC, "The Radiological Exposure of the Population of the European Community from Radioactivity in the Northeast Atlantic" (project Marina), Directorate-General Environment, Nuclear Safety and Civil Protection, 1989

Memberships

- Policy Council Economy, Science & Technology (Flemish authority)
- Flemish Council for Science and Innovation (VRWB)
- Commission for Educational Exchange between the USA, Belgium and Luxemburg (Executive committee & Board of Directors)
- Science Europe (acting president, vice-president, Governing Board and General Assembly)
- European Science Foundation (ESF) (vice-president, Governing Board, Steering Committee and General Assembly)
- Queen Elisabeth Medical Foundation (Board of Directors)
- Hercules Foundation (Board)
- Academia Belgica, Rome (Board)
- Center for Medical Innovation (Board)
- Leopold III-Foundation (Board)
- Interuniversity College for Management Sciences (ICM) (Board)
- Foundation Scientific Research in Africa (Board)
- Flanders Marine Institute (VLIZ) (General Assembly)
- International Solvay Institutes (General Assembly)
- Flamenco (General Assembly)
- Expertise Centrum O&O Monitoring (ECOOM) (Steering Committee)
- Evaluation committee Institute Society and Technology, Flanders (2007)

Curriculum Vitae

Name	Rita Hofmann-Sievert	
Home Address	Impasse Champ Montant 12, 1723 Marly	
Date of Birth	November 10, 1952	
Place of Birth	Herzberg/Harz (Germany)	
Place of Origin:	Schüpfen (BE), (Switzerland)	
Citizenship	Swiss and German	

Professional career	Research lecturer at the University of Applied Sciences, Bern University of the Arts, Institute for Materiality in Art and Culture (part time position) https://www.hkb.bfh.ch/	2013-now
	Scientific collaborator at Wifag Polytype Technologies https://www.wifag-polytype.com/	2014-2015
	Head of technology and Development at ILFORD Imaging Switzerland	2005-2013
	Director Research and Development ILFORD Group	2000-2005
	Research chemist and group leader Research in digital exposure devices and colour at Ciba Geigy in Basel and ILFORD AG in Marly,	1983-2000
Awards & Nominations	Honorary member of the Society for Imaging Science and Technology https://www.imaging.org/	2019
	Nomination as individual member into the Swiss Academy of Engineering Sciences (SATW) https://www.satw.ch/	2010
	HP Image Permanence Award	2008

Professional activities	Swiss Academy of Engineering Sciences (SATW), member of the Board	2013-now
	Member of the Board at the National Thematic Platform 'Innovative surfaces' https://www.innovativesurfaces.ch/io	2013-now
	Visiting Lecturer at the School of Arts in Stuttgart (Hochschule der Künste in Stuttgart) and the Reijksmuseum in Amsterdam	2010-now
	Associate Editor of 'Photografischer Rundbrief' https://www.rundbrief-fotografie.de/	2014-now
	Associate editor of 'Journal of Imaging Sciences and Technology'	2014-now
	Member of the Industrial Advisory Board of the Swiss Federal Material Research Institute (EMPA) https://www.empa.ch	2010-2014
	Swiss expert for ISO Technical Committee -42, Standards for photography https://www.iso.org/committee/	1998-now
	Member of the board for the Society of imaging Science and Technology (IS&T), USA	2003-2013
	President of the Society for Imaging Science and Technology, (IS&T), USA	2009-2011
Education	General Chair of the International Conference on Non-impact Printing, NIP in Baltimore, USA	2009
	Post-doctorate in physical chemistry University of Colorado and Penn State University, USA	1981-1982
	Academic assistant in physical chemistry: University of Göttingen, Germany)	1977-1982
	Doctorate in Chemistry, University of Göttingen,	1978
	Master in Chemistry, University of Göttingen, Germany	1976

Profile: Prof. Brig. Dr. Nasim A. Khan (Retd) {SI (M)},
Vice Chancellor Pakistan University
Senior Executive Director, Osmani & Company Karachi
Executive Director & Fellow- Pakistan Academy of Engineering

Former Vice Chancellor Hamdard University

Former Vice Chancellor – Nazeer Hussain University

Former Secretary & Founder Member- Alternative Energy Development Board, Islamabad

Former Dean National University of Sciences and Technology, Islamabad



Professor Dr. Nasim A. Khan SI (M), has remained vice chancellor of two universities in Pakistan namely Hamdard University & Nazeer Hussain University.

He has made exceptionally high quality thirty five years' rigorous efforts in promotion of Alternative Energy in Pakistan since 1982, once he wrote his first prize winning "Solar Energy Guide and Data Book for Pakistan" published by College of EME.

His unique efforts continued and further led in identification of famous "Gharo-Kati-Bandar Wind Corridor" in Pakistan in the year 2000, where he reported existence of 50,000 MW of power potential in the Corridor funded by the then Pakistan Council for Appropriate Technologies.

In the year 2003, his tremendous efforts lead to creation of Alternative Energy Development Board under the Prime Minister's Secretariat, Islamabad.

His unique efforts have been recognized nationally as well as internationally in form of several awards like; Higher Education Commission (HEC) Best Scientific Book (2012) "Energy Resources and Utilization in Pakistan"; "Energy Award" by Pak Energy Review (2010); "Man of the Year 2009 in Emerging Technologies" (2010) by South Asia Publications; "Energy Globe Award" by Energy Globe at EU, Parliament, Austria (2007); 2nd prize for book from Pakistan Book Council for children (2007); "Sitara-i-Imtiaz (M)" (2004); Finalist of the "2002 World Technology Network Award for Energy" and Fellow of World Technology Network, USA (2002); He won First prize on best published book for Children from National Book Council of Pakistan (2002), and Commendation and PhD scholarship for his book "Solar Energy" (1987). He remained Chairperson of "International Solar Energy Society Pakistan Section" and "Member of WWEA."

Dr. Nasim is Ph.D. in Mechanical Engineering from Colorado State University, USA (1992), M.S. in Energy Resource (1985) and M.S. in Mech Engg (1983) from the University of Pittsburgh, USA and B.E. (Mech Engg) from NED University (1974).

His feasibility study on wind power generation attracted 97 investors in wind power generation, for which the Government of Sindh allotted 100,000 acres land. There are 16 wind power projects (WPP) generating 786 MW's of electricity in Jhimpir area while another 47 investors are in different stages of completion. His scrupulous efforts of thirty years in wind power sector has resulted in formation of complete culture of wind power generation in Pakistan. The total investment in wind power sector that can be attributed to his effort as Founder Member of AEDB Team have led to an investment of \$2.7 billion on ground while another \$2.3 billion are in various stages of completion in wind power technology totally in private sector in the country.

He has ten Patents.

He has been working on development of Electric Vehicle Culture in Pakistan since 1997 when he first developed a Solar EV at College of EME, NUST, Islamabad. He continued his efforts at AEDB, at Hamdard University, at Nazeer Hussain University, under Energy Efficient Automobile Company (a private Company). He has part patent on solar Rickshaw developed by him.

Univ.-Prof. Dr.-Ing. Ulrich Wagner

Technical University of Munich
Chair for Energy Economy and Application Technology
Arcisstr. 21
80333 Munich
Tel.: 089 289-28301
uwagner@tum.de



Carrer

1976-1981	Studies of Electrical Engineering at Uni Andes in Bogotá / Colombia and TU München
1987	PhD Thesis at TUM, „Energy Efficiency of EV Batteries “
1987-1995	General Manager at Forschungsstelle für Energiewirtschaft e. V. (FfE)
1988-1995	Guest Lecturer at TUM „Load Optimizing and Energy Storage“ sowie „Electric Road Traffic“
since 1995	Scientific Director of Forschungsstelle für Energiewirtschaft e. V.
since 1995	Full Professor at chair for Energy Economy and Application Technology at TU München
1996 - 2008	Director of wiba (Hydrogen-Initiative Bavaria)
2005-2008	Dean of the Faculty Electric Engineering and Information Technology, TU München
2010-2015	Member of Executive Board of DLR Deutsches Zentrum für Luft- und Raumfahrt

Scientific Focus

Energy Technology and Efficiency, Energy System Analysis, Electric Mobility, Sector Coupling

Actual Memberships and Honours e.a.

Bayerische Akademie der Wissenschaften, acatech, Wissenschaftlicher Beirat ENFS Energieforschungszentrum Niedersachsen; Kuratorium Forum für Zukunftsenergien, e.a.

VDI-Ehrenring (1995), Pro meritis scientiae et litterarum des Bayerischen Kultusministeriums (2012)

Munich, October 2020

CAETS strategy development

Proposal for discussion



Royal Swedish Academy of
Engineering Sciences

Strategic development of CAETS

At the CAETS Board meeting 24 June 2019, it was agreed that the Board would appoint a small group to develop a 5 - year strategic plan organized around three components:

1. Structuring CAETS to more effectively execute its plan,
2. Achievement of CAETS Objectives, and
3. *Membership Development*

Tuula Teeri, IVA

Oh-Kyong Kwon, NAEK

Hugh Bradlow, Australia

Sanak Mishra, INAE

David Thomlinson, RAEng

Friedrich Wu, CAE

Ruth David, Secretariat (support)

Objectives of CAETS

- **The Board proposal** - a slight revision of the **current CAETS Bylaws** - Article 1.
 1. Provide an independent nonpolitical and non-governmental international forum for enlightened dialogue and communication of engineering and technological sciences,
 2. Contribute to advancing engineering and technological sciences in order to promote economic growth, sustainable development and social welfare throughout the world,
 3. Foster collaboration and the development of bi- and multilateral programs between the member academies,
 4. **Prepare science-based proposals in order to advise governments and international organizations on policy issues related to engineering and technology development,**
 5. **Promote diversity, inclusion and ethics in the global engineering profession,**
 6. **Contribute to continuous improvement and modernization of engineering education and practice internationally,**
 7. **Foster a balanced public understanding of the applications of engineering and technology,**
 8. Foster establishment of engineering academies in countries where none exist.

Structuring CAETS to more effectively achieve the goals

Being an informal network organization, CAETS has often experienced difficulties in leveraging the results of the various discussion groups/committees and agreeing on the CAETS statements following the annual convocations.

The Board proposal :

Constitute **Committees/Working Groups** that are based on strong mutual interest to improve ownership, commitment, engagement and leverage.

These themes may be of global significance or region-specific (like Asia, Europe, Africa etc.).

- Assign a committed leadership/**Chair** to each of the Council approved focus areas/working groups of CAETS.

-
- These WG leaders/Chairs would be **elected to the CAETS Board** by separate Council approved nomination process and serve the **duration of the Working groups** (**Bylaws change**)

- **OR**

- **These WG leaders/Chairs will be appointed separately, serve the duration of the Working groups and report to the Board**

-
- These Board members/WG Chairs would be responsible for an **annual board/council review** of the work done by the Committees/Working Groups, including a plan how to **communicate** the results.
 - The recommendations emanating from such activities should be offered to concerned national/international bodies for facilitating engineering solutions and implementation *AND/OR represent the themes for some of the the Annual Convocations.*

SUMMARY

Regional focus
Global focus

ANNUAL CONVOCATIONS

COUNCIL

Board 3 + 1 + 8 – Council approved **nomination process**

Presidents

Secretary
general

→ WG 1
→ WG 2
→ WG 3
→ etc

COMMUNICATION
CAETS Statement

- *Prepare science-based proposals ... on policy ...*
- *Foster a balanced public understanding ...*

Current themes / 2020

- Energy
- Engineering education
- Sustainable development goals
- Diversity and inclusion
- Communicating with public
- COVID-19 (*recently chartered*)

NEXT STEPS

- Board approval of the principles / December 2020
- Approval of the new process January/February 2021
- Communication with the Council
- Final proposal May/June 2021
- Decision in the Annual Meeting 2021

CAETS Meeting 2021 – Buenos Aires – Argentina

PROGRAM

September 19 Sunday	Arrivals - Hotel accommodation – Sheraton Retiro
September 20 Monday	14 – 17 EXCOM and Board Meetings 15 – 17 Energy Comitee 15 – 17 Special Comitees 18 Cocktail Reception
September 21 Tuesday	9 – 10 30 Plenary: Energy and global warming 11 -13 Session1: Renewables: Solar and Wind Energy 11-13 Session2: The future of nuclear energy 15 -17 Session 3: Hydro, biomass, geothermal 15-18 Session 4: Oil & gas; Coal
September 22 Wednesday	9-12 Plenary: International agreements to reduce CO2 emissions. New energy challenges. Next energy revolution 10 30-12 Session 5: Education on engineering regarding exponential technological change. 15 CAETS Council Meeting 20 Dinner in the Palacio de las Aguas
September 23 Thursday	Technical and cultural visits

CAETS 2021 Meeting, Buenos Aires

Next steps

CAETS MEETING 2020	Share preliminary Program
December 1st 2020	Invite speakers and panelists
April 1 st 2021	Call for papers
July 1 st 2021	Registration open
September 20 2021	CAETS 2021



SHERATON

Buenos Aires
Hotel & Convention Center

- 740 Total sleeping rooms
- 359 Double- double rooms
- 70.000 Sqft total meeting rooms
- 5 F&B outlets
- 2 Swimming pools
- 2 Tennis courts



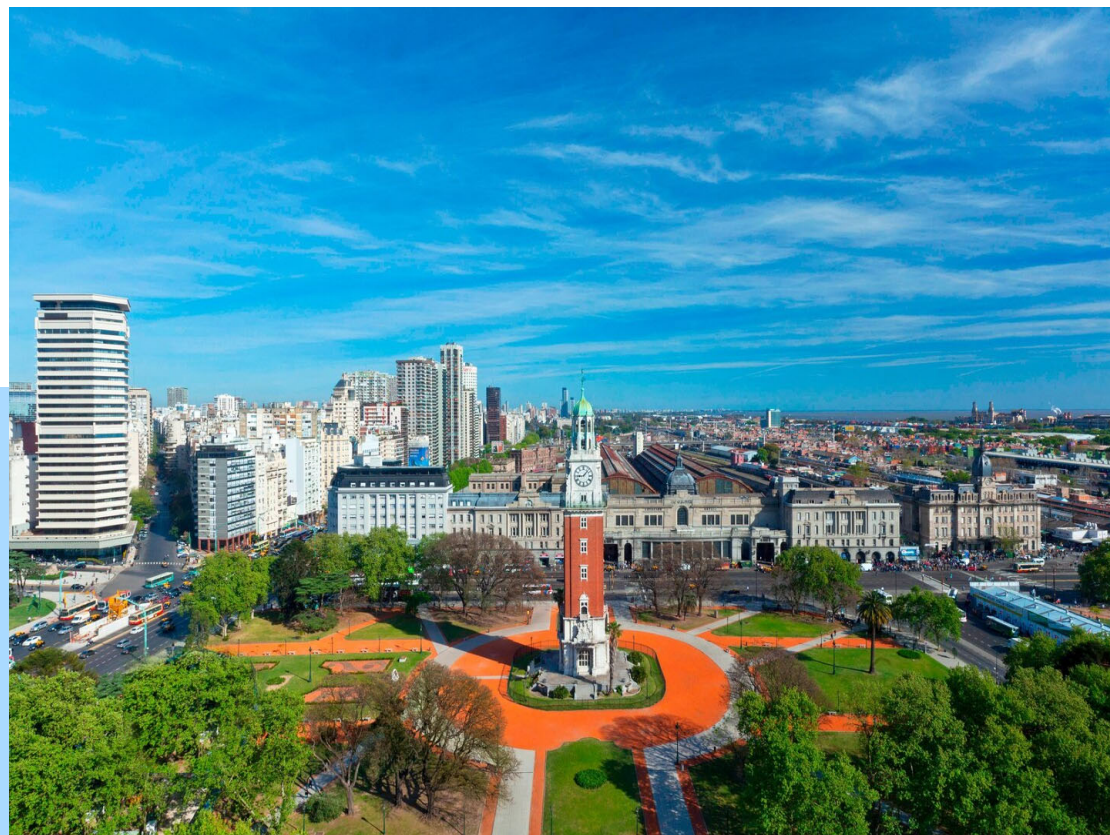
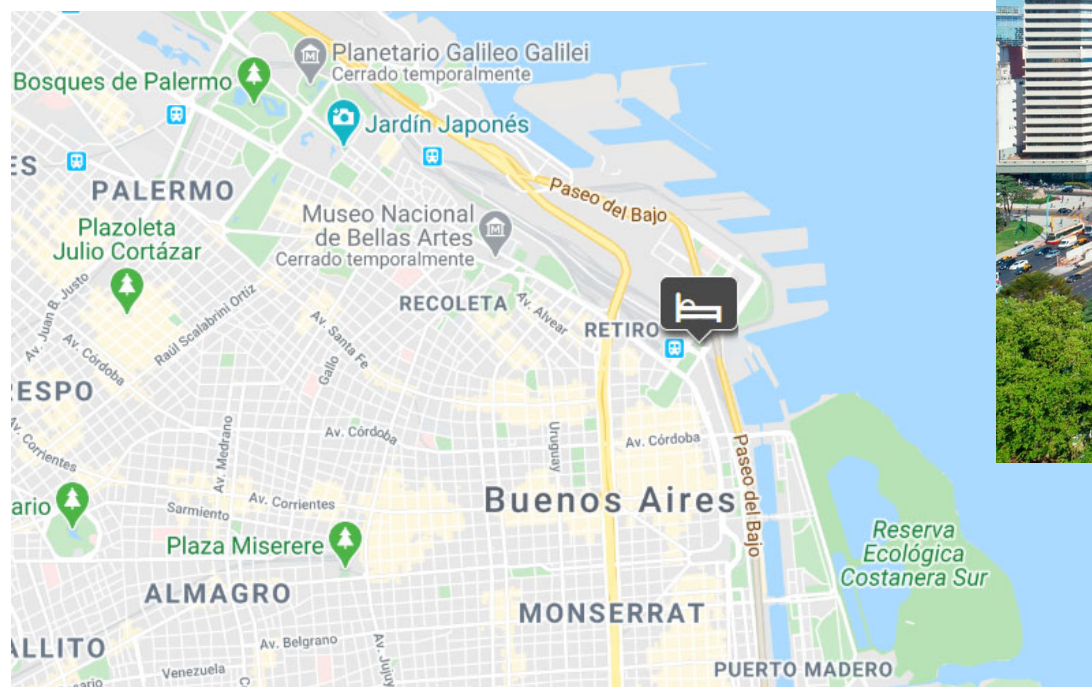


SHERATON

Buenos Aires
Hotel & Convention Center

ATTRACTIONS

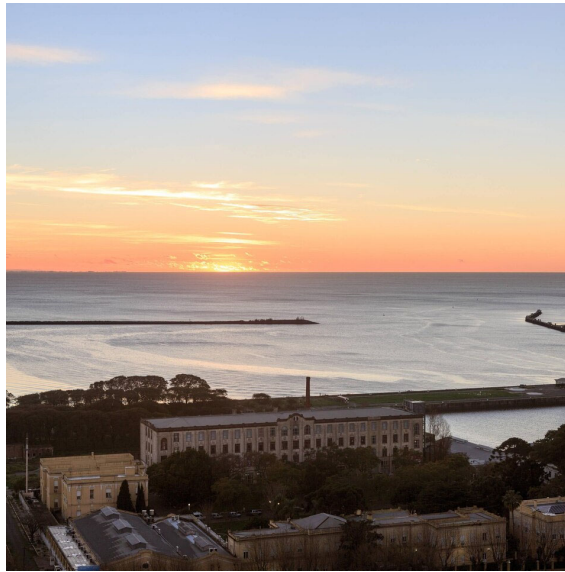
Florida Street	0,5 km.
Puerto Madero	1,6 km.
Reserva Ecológica	1,7 km.
Plaza de Mayo	1.9 km.
Recoleta Cemetery	2,4 km.
Caminito La Boca	4,5 km.
Bosques de Palermo	4,7 km.



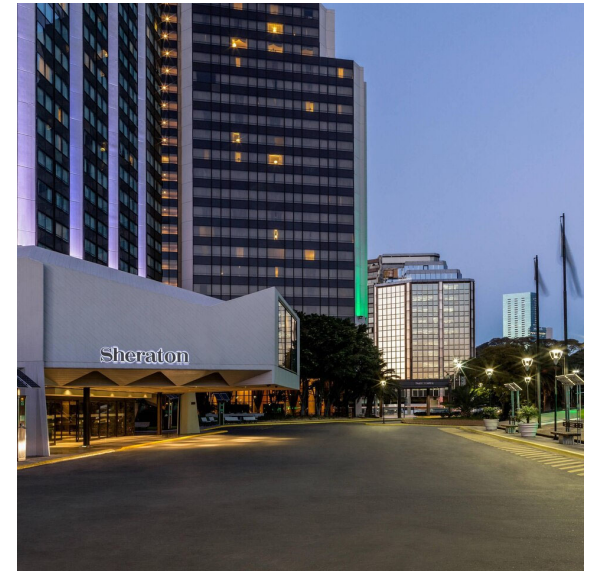
Hotel Views



City View



River View



Main Entrance

Welcoming



Main entrance



Front Desk



Lobby 1225

Classic Charm and Exceptional views



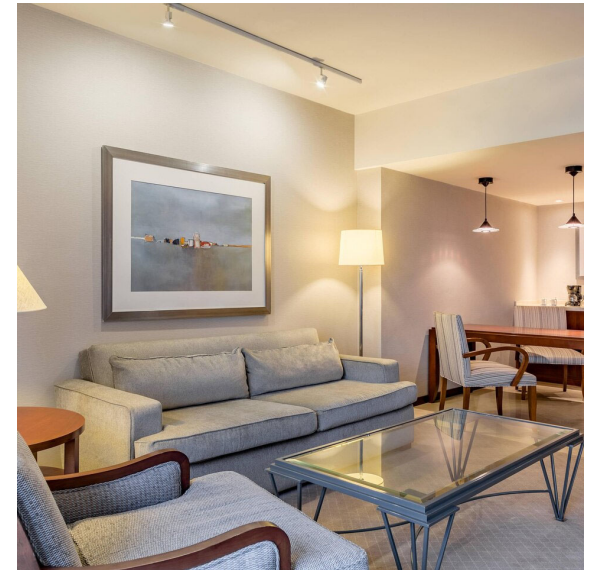
Classic Room

#515 keys



Club Floor Room

#192 keys



Suite Premier

#31 keys

Specialty Suites



San Martin Suite



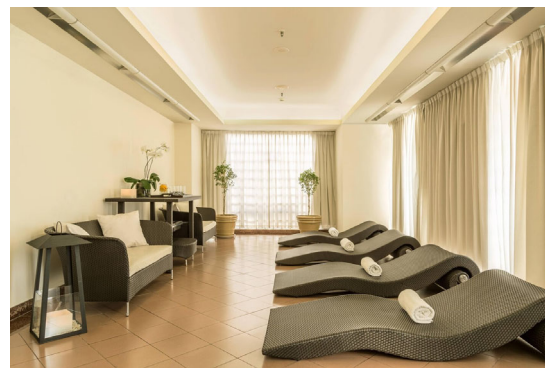
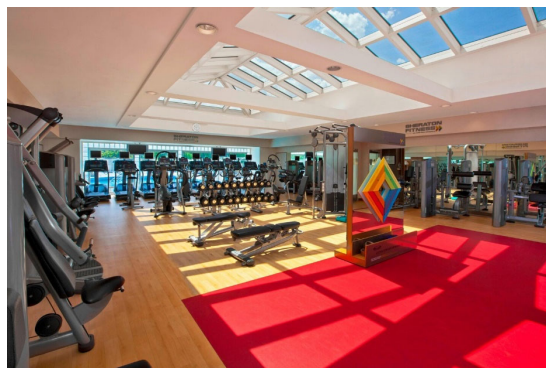
Belgrano Suite



San Martin Suite



Stay Active





SHERATON

Buenos Aires
Hotel & Convention Center

Buono Italian Kitchen



A Breadth of Options

Sheraton Club Lounge



Grab & Go



Lobby Bar 1225



Express To Go



Coming
Soon!
Coffee
Station

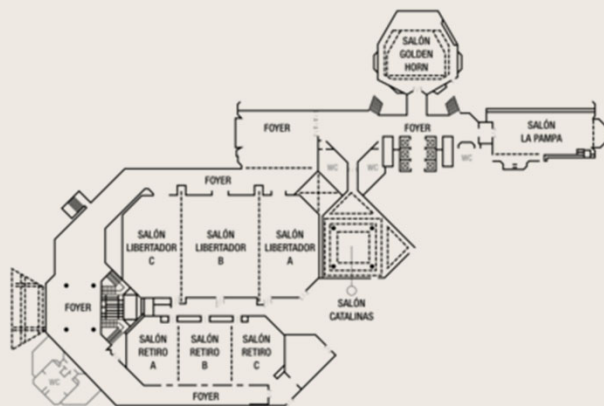


SHERATON

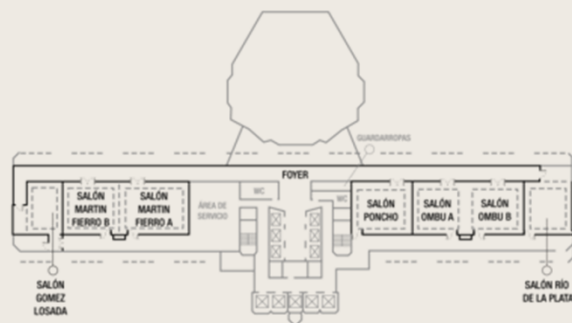
Buenos Aires
Hotel & Convention Center

Meeting Rooms Portfolio

FIRST FLOOR



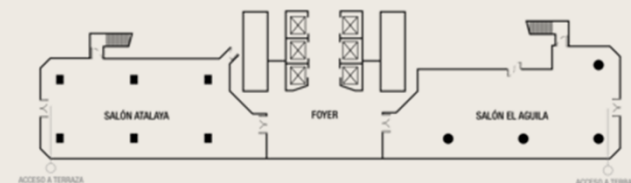
SECOND FLOOR



SAN ISIDRO LOWER LEVEL



24TH FLOOR





SHERATON
Buenos Aires
Hotel & Convention Center

Capacity Chart

15 Event
Rooms

21 Maximum
Breakout
Rooms

Meeting Rooms	Dimensions (L x W x H)	Area (SQ - FT)	Banquet Round Table 1.83 BBK/Lunch/Dinner	Banquet Round Table 1.83 Free forehead-Stage (7.20 x 3.60)	Theater	Schoolroom	U - Shape	Rectangular Table	Directory
LIBERTADOR	161x85x20	13.713	84 x 4 pax	75 x 4 pax	336	120			
Libertador A	49x85x20	4.198	27 x 4 pax	24 x 4 pax	88	48	38		
Libertador B	62x85x20	5.317	30 x 4 pax	27 x 4 pax	96	64	46		
Libertador C	49x85x20	4.198	27 x 4 pax	24 x 4 pax	88	48	38		
RETIRO	128x52x13	6717	31 x 4 pax	32 x 4 pax	125	60			
Retiro A	46x52x13	2.411	11 x 4 pax	8 x 4 pax	30	20	16	20	
Retiro B	46x52x13	2.411	9 x 4 pax	16 x 4 pax	58	24	20	24	
Retiro C	46x52x13	2.411	11 x 4 pax	8x 4 pax	30	20	16	20	
SAN ISIDRO	128x112x13	14.272	57 x 4 pax	50 x 4 pax	220	102	25	30	
SAN TELMO	135x72x13	9.709	22 x 4 pax	17 x 4 pax	170/150/84	66/48 apaisado	30	34	26
GOLDEN HORN	62x69x13	4.295	10 x 4 pax	10 x 4 pax	36	12	10	12	9
CATALINAS	89x52x10	4.650	12 x 4 pax	10 x 4 pax	32	16	12	14	12
LA PAMPA	82x36x13	2.960	12 x 4 pax	10 x 4 pax	38	14	17	24	17
ATALAYA	82x36x10	2.960	7 x 4 pax	6 x 4 pax	20	14	11	12	12
AGUILA	85x28x10	2.379	7 x 4 pax	6 x 4 pax	20	14	11	12	12
MARTIN FIERRO	59x28x10	1647	6 x 4 pax	6 x 4 pax	18	14	14	16	14
Martin Fierro A	30x30x10	872							
Martin Fierro B	30x30x10	872							
OMBÚ	59x28x10	1647	6 x 4 pax	6 x 4 pax	18	14	14	16	14
Ombú A	30x30x10	872							
Ombú B	30x30x10	872							
PONCHO	30x28x10	823	4 x 4 pax	4 x 4 pax	12	6	7		8
RIO DE LA PLATA	26x36x10	947	4 x 4 pax	4 x 4 pax	12	6	7		7
GOMEZ LOSADA	20x28x10	549	3 x 4 pax	3 x 4 pax	10	6	7		8
AUDITORIO	56x72x10	4026			82				

La Pampa



Águila



Retiro



San Telmo



Río de la Plata





For additional information please contact:

 sales.buenosaires@marriott.com

 www.sheratonbuenosaires.com

https://drive.google.com/file/d/1_j--40SatjBR70ulh0vLrmJeQkF833_R/view?usp=sharing



CAETS 2021 ARGENTINA

Engineering a Better World

THE FUTURE OF ENERGY

Program

Next steps

CAETS MEETING 2020	Share preliminary Program
December 1st 2020 to March 31 2021	Invite speakers
April 1st 2021 to June 30 2021	Call for papers
July 1st 2021	Registration open
September 20 to 23 2021	CAETS 2021

Program CAETS 2021

September 19 Sunday	Arrivals - Hotel accommodation – Sheraton Retiro
September 20 Monday	14 – 17 EXCOM and Board Meetings
	15 – 17 Energy Comitee
	15 – 17 Special Comitees
	18 Cocktail Reception

Program CAETS 2021 (Cont)

September 21

Tuesday

9 – 10 30 Plenary: Energy and global warming

**11 -13 Session1: Renewables: Solar and
Wind Energy**

**11-13 Session2: The future of nuclear
energy**

11-13 Session 3: Hydro, biomass, geothermal

15-18 Session 4: Oil & gas; Coal

**16-18 Session 5: Energy network
optimization**

Program CAETS 2021 (cont,)

September 22

Wednesday

9-12 Plenary: International agreements to reduce CO2 emissions. New energy challenges. Next energy revolution

10 30-12 Session 5: Education on engineering regarding exponential technological change.

15 CAETS Council Meeting

20 Dinner in the Palacio de las Aguas

Program CAETS 2021 (cont)

September 23

Thursday

Technical and cultural visits



CAETS 2022 - PARIS

NATF - National Academy of technologies of France





CAETS 2022 - PARIS

Dates:

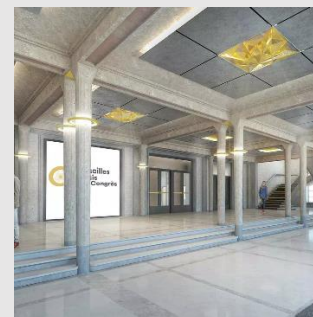
March 2022

From Monday 21 to Friday 25





Venue: Versailles



Palais des Congres





Château de Versailles





Theme

« Engineering a better world »

TECHNOLOGICAL BREAKTHROUGH FOR HEALTH





Technological breakthrough for Health

Draft main topics:

- Health data management
- Biological data acquisition and processing
- Technologies for repair
- Virtual brain
- Pharmacology design
- Breakthrough in imaging
- Nano networks for health
- Ethics





Pascal Viginier, NATF President

CAETS President elect for 2021



Gerard Creuzet, Deputy Delegate for Foreign Affairs

NATF President of CAETS 2022 Organisation Committee



Bruno Revellin-Falcoz, NATF Honorary President

NATF Delegate for Foreign Affairs



CAETS Energy Committee

NAEK 한국공학한림원

Chair: Chinho Park

October 15, 2020
Seoul, South Korea

Previous and Pending CEC Reports

2010: Deployment of Low-Emissions Technologies for Electric Power Generation in Response to Climate Change

2013: Opportunities for Low-Carbon Energy Technologies for Electricity Generation to 2050

2015: Transitioning to a Lower Carbon Economy – Technological and Engineering Considerations in Building and Transportation Sectors

2018: Clean Energy Technologies – Challenges and Solutions (Publ. July 2020)

2020: Solutions for High-Level Penetration of Intermittent Renewable Energy (Final Draft Pending, to be publ. Dec 2020)



Mar 2019

Seoul Meeting
Set Topic
Discussed Timeline
Brainstormed Structure



June 2019

Stockholm Meeting
Revised Questionnaire
Set Response Deadlines



October 2020

Seoul Conference
Received Country Reports
Analyzed Peer Groups
Compiled Findings
Present Final Report

March Meeting Agreements

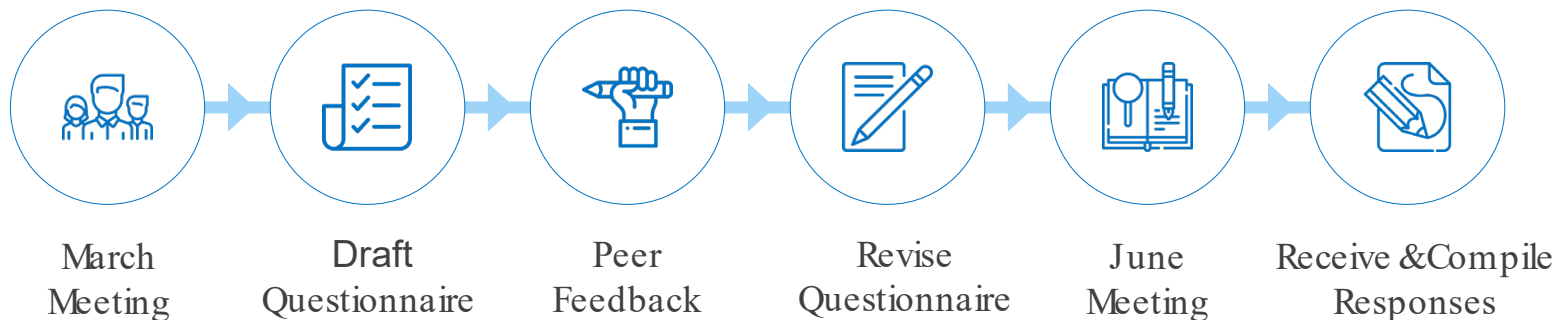
Seoul, South Korea

- Theme: Solutions for High -Level Penetration of Intermittent Renewable Energy
- Target readership: CAETS members, policy makers, energy -related international agencies
- Digital version only
- Format to juxtapose each country 's situation, strategy, and ideas from academies
- Draft a 6-page questionnaire with a clear pattern to simplify comparisons
- Contents:
 1. Compare each country 's status quo in the energy mix
 2. Showcase new technologies that offset intermittency
 3. Offer policies that control the energy market to reduce intermittency

June Meeting Agreements

Stockholm, Sweden

- Since March, drafts of the questionnaire were written and edited by member countries
- Still receiving revisions to questionnaire until July 6th
- Final questionnaire will be sent to CAETS member academies in July 20th
- Argentina, Korea delegates are currently writing exemplars to be used as guidance material
- Country responses due by Sept 20th, 2019
- Country reports will be compiled into a draft report by early next year, 2020



July 2019 ~ May 2020

Compiling Stages

- Circulated questionnaire draft
- Received and processed data from 21 contributing authors
- Biweekly check ins between CAETS and authoring NAEK authors (Rosa Chong and Chinho Park) to sort, group, compare, and peer -analyze countries into similar standing
- Drafted recommendations and solutions for each focus group

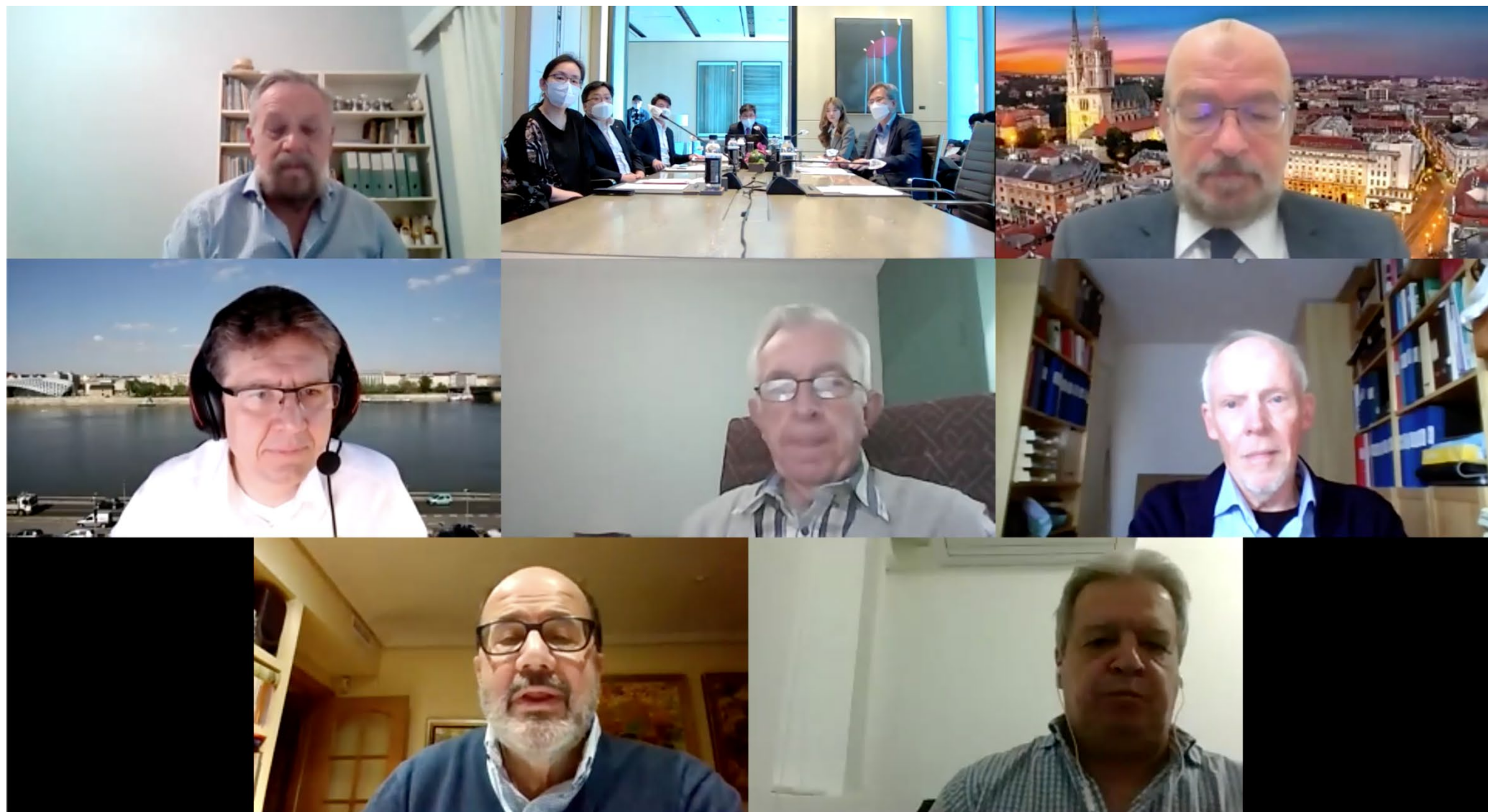
May 2020 ~ Sept 2020

Research Stages

- Solicited CAETS contributing authors for feedback on several draft versions
- Updated data to reflect 2018 measurements and tracked policy changes
- Conferred with authors on issues of contention, including scope of the report (and the decision to adapt or exclude topics like nuclear power, history of distribution investments, and categorization of waste as a nonrenewable product)

October 12, 2020 Meeting

27 Attendants from 18 Academies: Argentina, Australia, Canada, Croatia, Czech Republic, France, Germany, Hungary, India, Japan, Korea, Mexico, New Zealand, Pakistan, South Africa, Spain, Sweden, Uruguay



October 12, 2020 Meeting

Comments and Edits

- Change of Working Title: *High-Level Solutions for Intermittent Renewable Electricity*
- France (next Report author) raised the concern that mention of CO₂ emissions may be lacking. Proposed as a topic for the next report.
- Argentina/Germany expressed concern from a lack of voices from important countries in energy sector, namely, Saudi Arabia, Brazil, and Russia.
- Other proposed topics include: comparison of electricity pricing and incentives models, examination of combined cycles technologies, evaluation of nuclear as a load-stabilizing solution

October 12, 2020 Meeting

Action Items

- India (Professor Mathur) suggested NAEK host a webinar in the Spring, after a circulation of the official CAETS report comes back from publishing stage
 - Inviting government officials from all nations, international press, journal members, academies, policy and stakeholders to learn about findings
 - Draft a shorter summary, and put into the public domain
- Argentina (Professor Solanet) actively soliciting recommended speakers for next year 's conference hosted by the ANIU delegation, TBD in Buenos Aires
- Election of the next CEC Chair: Chinho Park (NAEK) => Yves Bamberger, France (NATF)
- Will circulate CAETS 2020 Report for final round of feedback, due October 23, 2020.
- CAETS Report 2020, publishing estimated December 2020.

CAETS 2020 PROGRESS

Research method



Purpose

- This report was written with an advisory purpose of informing stakeholders in various decision-making capacities who are looking for expert technological insights, as well as providing a quick overview on the approaches of various member countries.
- Given the scale and complexity of energy transition, and its interdependencies across different systems, no single solution can unilaterally achieve a complete transition. Therefore, the CAETS Energy Committee intends that this report should serve as a guide to policymakers by providing information on the specific approaches of various countries in addressing their energy transitions, which depend on the differences in their societies and economies.

Categorization of peer groups

- Countries attempting to meet energy goals must consider more novel methods to better integrate renewable resources. As such, the 21 countries were sorted into three focal groups based on their approach to intermittency:
- Group A: Large geographic interconnections to absorb variability and modulate output;
- Group B: The dispatch of secondary “spinning reserves” to quickly correct load fluctuations; and
- Group C: Investment in transmission and distribution “smart grid” systems to efficiently deliver power without compromising quality.

Status of the Report

- Finalized CAETS 2020 with final draft, edited and approved by members and authors (Oct 2020)
- Pending publishing (Dec 2020)
- Pending submission to international publications, such as the United Nations Environment Program's Global Status Report, or the International Energy Agency's World Energy Outlook (TBD)

Four Seasons Hotel, Seoul, South Korea
October 12th, 2020





Thank You



Item 10

Communications Committee Report

Proposal: CAETS Communications Prize

Professor Hugh Bradlow

President, Australian Academy of Technological Sciences and Engineering

COMMUNICATIONS COMMITTEE OBJECTIVES

- 1. Improve communications of technology policy to government and the public**
- 2. Inspire young people with the importance of engineering and technological sciences**
- 3. Improve understanding of the important benefits of technology amongst the general public**



COMMUNICATIONS PRIZE PROPOSAL

➤ Objective

- Inspire students with engineering success stories
- Show the general public how engineering changes their lives for the better

➤ Method

- Create a prestigious global award to encourage member Academies to develop inspiring video presentations
- Awards will be based on a short (preferably 5 minutes but maximum 15 minute) video



THE AWARDS

➤ Engineering success story – proven impact

- Presented by a Fellow of a member Academy
- Outcomes of the work must be proven economically or in public service

➤ High potential innovation

- Presented by anyone who is introduced by a Fellow of a member Academy
- Work does not have to be fully proven but must present a convincing solution which can be proven with time



THE PROCESS

- **Videos presented in English or with subtitles in English**
- **Each member Academy can submit a maximum of 2 videos per year**
 - Closing date 6 months prior to Annual CAETS meeting
- **Winners will be selected by an international Committee appointed by the CAETS Communications Committee**
- **Initially no prize money but we shall seek corporate sponsorship for future prizes**
- **Awards announced at Annual CAETS meeting**



JUDGING CRITERIA

- **How well the problem being solved is described (will it inspire the audience to recognise the importance)**
- **How innovative the solution is**
- **How well it is communicated to a general audience**
- **For category 1: proof of impact**
- **The publicity plan to be presented with the video**



PROPOSAL TO COUNCIL

- Approve the establishment of the 2 CAETS Communications Awards
- First awards to be made at the CAETS meeting in Buenos Aires on 19 September 2021
- Closing date for submissions on 1 April 2021



CAETS Diversity & Inclusion Working Group

David Thomlinson

International Secretary, Royal Academy of
Engineering

Diversity and Inclusion Working Group

Purpose: To share best practice among Academies in embedding diversity and inclusion in their Fellowships and activities, and to think of the role CAETS can play in disseminating best practice among Academies.

Initial meeting was held on Thursday 8 October, bringing together 9 academies in two groups (Oceania, Asia, Africa and Europe plus the Americas).

Key messages

- Making the Fellowship more reflective of the engineering community is a key concern for all participating Academies. Gender diversity is a common challenge globally; the challenge of ethnic diversity is expressed differently in different countries, and involves social, economical and cultural factors. Improving age profile of Fellows is also a priority in some countries.
- Many academies have targets for female fellows, most with aspirations to reflect proportion of female engineers nationally - but some with ambitions to go higher.
- Involves choices between changing the system and changing behaviour within the system - the latter is more difficult but often more lasting
- Very visible role models and recognition of people “where they are” is vital in improving engagement with under -represented groups.
- Leadership and modelling behaviour from the top is extremely important.

Next Steps

- It was agreed a learning group would be created among Fellows and staff whose role was significantly focused on diversity and inclusion.
- An online resource will be created for data, reports and training materials from those Academies who had developed work in this area for dissemination among other academies.
- We are open to making space for other learning arrangements – e.g. 1:1 buddying sessions on specific issues of bilateral interest.
- Three future meetings would be held to share more in depth learning on D&I in Fellows, D&I in programmes, and building inclusive cultures.

CAETS SDG Working Group

David Thomlinson

International Secretary, Royal Academy of
Engineering

CAETS SDG working group

Purpose: To build capacity of academies to take more leadership roles in sustainability policies by sharing knowledge and best practice on how the engineering profession is influencing, driving and leading progress towards sustainability targets at a national level.

We intend to run four quarterly Zoom meetings this year.

Initial meeting on 29 September focused on academies' engagement in national sustainability plans, and looked for examples of good engineering leadership.

Key learnings

- It is much easier to help governments meet targets they have already set than to influence the setting of targets.
- Trust and buy in is essential: academies who have taken a leading role have either strong historic links to government, or invested strongly in building political relationships.
- There was a strong feeling that promoting an engineering systems approach to meeting ambitious sustainability targets was a natural space for engineers to operate in, and met a key government need.

Next Steps

- Sharing of policies and approaches across countries will continue and we will create a library of resources on systems approaches to sustainability within the CAETs network.
- The focus will be on national sustainability policies, particularly decarbonisation, with particular focus on the opportunity for CAETS to develop a declaration or resource on engineering's role in decarbonisation to feed into COP26 in Glasgow in November 2021.
- Three further steering group meetings will take place, going into more depth on specific fields of decarbonisation, with an emphasis on how academies can help governments plan and manage systemic transformation.

CAETS Engineering Education ---

Global Engineering Education Conference,... Post Pandemics....

Proposal for a Global Engineering Education Conference

(report to CAETS Council Meeting, Oct. 15, 2020), and

Minutes for the Engineering Education Working Group, Oct. 7, 2020

Jesse Zhu, Western University
Canadian Academy of Engineering

jzhu@uwo.ca

A Tentative Action Plan, drawn at Stockholm

- Establish an effective communication channel for further discussion
- Forming a small working group to re-iterate and then converge ideas
- To prepare a document for discussion within the group
- Possibly, to bring such a good working document into the Seoul Meeting next year, when we shall seek broader consultation, and hopefully to form a CAETS statement for Engineering Education

**Not much progress was made given the Covid-19 Pandemic,
but now we see an opportunity to achieve all listed about**

**More importantly, address the emerging needs and new challenges
with engineering education, post pandemic**

Challenges and Opportunities (2020)

- Covid-19 Pandemic “fast-tracked” on-line education, which may be long overdue
- Opportunity to “release” the huge potential of virtual learning
- How to address hand-on experience for engineering education
- How to educate the younger generation of soon-to-be-engineers growing up with i-pad
- What is the essence of engineering education, what are the “must”, calling for re-thinking and re-shaping
- Challenges lead to opportunities, CAETS in an excellent position to take a world lead

Plan and Action Steps (3~4 months)

- Education Group / CAE is proposing to host such a conference around Feb-March 2021 (Canadian Academy of Engineering)
- CAETS is invited to co-sponsor the conference
- Western University co-host the event, to provide logistics (Canada)
- Open invitation to sister academies to co-organize (initial response at the Oct. 7 meeting was very positive.
- Form a scientific committee, define/refine and develop the program, right after CAETS 2020

Considerations – Suggested topics

- Dynamic changes in Engineering education will happen / is happening
- Engineering Education may be more broadly defined and becoming more diversified, not just narrowly focused on the university-level programs
- The demand side (employer perspective) will be driving more for changes
- The diversified needs for new generation of engineers
- The impact of technology (virtual experimentation, etc.)
- Customized / personalized learning
- Life-long learning – how does it fit into engineering education?

There is an excellent opportunity

Considerations – Organization

- Unconventional way to organize the conference, more along with and taking advantage of the on-line format
- Spreading conference over 2-3 weeks,
- Individual sessions of unique topics proposed and organized by member Academics, coordinated by CAE/CAETS
- Innovative method of delivering speeches, plus panel discussion
- Main plenaries organized by CAE/CAETS

All sister academies are invited to participate

Next meeting, Oct. 21, 2020

COVID-19 Special Committee

2

SEOUL KOREA

- ◆ The National Academy of Engineering of Korea (NAEK) has proposed to the International Council of Academies of Engineering and Technological Sciences (CAETS) to launch the 'COVID-19 Special Committee' to determine what role we, as the engineering professionals, can play in overcoming the difficult situation of COVID-19.
- ◆ The COVID 19 special committee consists of 21 members.
 - ✓ 11 Korean Members from NAEK & NAMOK
 - ✓ 10 recommended members from the academies around the world



NAEK
Youn Hee Choi
(Chairperson)

Senior Research Fellow,
Korea Institute for Industrial Economics &
Trade



NAEK
BG Rhee

CEO, SCM Lifescience Co., Ltd.
Chairman, Int'l Vaccine Institute
(IVI) Korea Support Committee



NAEK
Kyu-sung Lee

Executive Vice President,
Samsung Biologics Co., Ltd.



NAEK
Sunghoon Kwon

Professor,
Dept. of Electrical and Computer Engineering
Seoul National University



NAEK
Sang Yup Lee

Professor,
Dept. of Chemical and Biomolecular
Engineering
Korea Advanced Institute of Science and
Technology



NAEK
Dong-Soo Kwon

Professor,
Dept. of Robotics
Korea Advanced Institute of Science and
Technology



NAMOK
Byungjoo Park

Vice President,
National Academy of Medicine of Korea
(NAMOK)



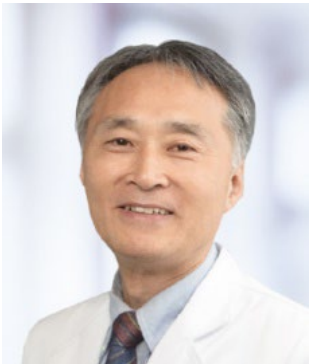
NAMOK
Kyung Sun

Professor,
Dept. of Cardiothoracic surgery
Korea University College of Medicine



NAMOK
Jong-koo Lee

Professor,
Dept. of Family Medicine
Seoul National University College of
Medicine



NAMOK
Myoung-don Oh

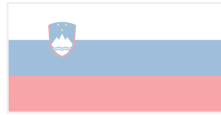
Professor,
Dept. of Internal Medicine
Seoul National University
College of Medicine



NAEK
Dong Soo Han

Professor,
Dept. of Computer Science
Korea Advanced Institute of Science and
Technology

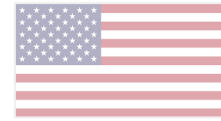
International Committee



Slovenia

Stane Pejovnik

Professor Emritus,
University of Ljubljana



USA

James M. Tien

Dean,
University of Miami



New Zealand

Geoff Chase

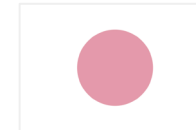
Chair Professor,
University of Canterbury



Sweden

**Mohammed
Homman**

CEO,
Vironova



Japan

Hideaki Koizumi

CAETS Board Member
Distinguished Fellow,
The Engineering Academy of Japan

CAETS 2020

International Committee



India

Amit Agrawal

Institute Chair Professor,
Indian Institute of Technology



Netherlands

Tim van der Hagen

President of the Board and Rector Magnificus,
Technical University Delft



Netherlands

Martin Paul

President,
Maastricht University



Canada

Federico Rosei

Professor,
Université du Québec



China

Bin Cao

Vice President,
China-Japan Friendship Hospital

Working Group Discussion

◆October 12, 2020

◆Attendees from Korea, New Zealand, Japan, India, China and many observers from around the world



◆ COVID-19 Special Committee Main Agenda

- ✓ Lessons Learned from COVID-19 and the Future Directions for Engineering Innovation

◆ Main Topics

- ✓ Introduction on Each Country's Current Covid-19 Situation
- ✓ Comments on our Main Agenda
 - Engineering & Technological Sciences to overcome the COVID-19 Situation
 - Encouraging the Global R&D Cooperation in the COVID-19 Era

◆ CAETS community to support the following three measures

1. We need to establish a global cooperation network of engineering and technology experts to actively respond to COVID-19
 - ✓ For the establishment of governance, it is necessary to prepare guidelines that encourage active participation and cooperation from each country.
2. We need an international and universal approval process for drugs and devices that are being invented. Also, we need open access for engineering and intellectual properties.
3. We call for the launch of a global fund to subsidize global R&D in various areas that require global sharing and collaboration in response to COVID-19.

- ◆ The COVID-19 Special Committee encourages the members of the CAETS
 - ✓ to support the formation of a global cooperation network and the establishment of a global R&D fund.
 - ✓ As a first action item, we ask each and every national academy to call on their political leadership to support this statement.
 - ✓ The commitment of engineering and technology experts will exert profoundly beneficial medical, social, and economic impacts on national efforts to overcome the hardships wrought by COVID-19.

Thank you

The Irish Academy of Engineering (IAE)
SUMMARY: CAETS Membership Application
Received 4 March 2020

IAE Background

The Irish Academy of Engineering (IAE) was founded in May 1997 by the Institution of Engineers of Ireland, now operating as “Engineers Ireland”. The Institution traces back to 1835 when a group of civil engineers met in Dublin and agreed to form the Civil Engineers Society of Ireland. In the late 1990s the Institution saw the need to afford engineering an additional and enhanced profile in national and international affairs, leading to the founding of IAE.

The IAE is an independent corporate body, recognized under Irish law. It retains a close relationship with the Engineers Ireland, shares many members, and continues to enjoy its support.

The IAE focuses on medium to long term societal challenges. In particular, their focus is on socio-technical and socio-economic issues which require technological and engineering solutions. The Academy also provides platforms for informed debate and discussion with subsequent input into public discourse and the formation of public policy.

“In making this application to CAETS we are acutely aware of the need to address many challenges at a global level; and the fact that engineering and science has a pivotal role to play in addressing these challenges. Engineering is the ‘magic’ factor which makes our modern world possible and shapes our lives; it ‘transforms science fiction into engineering fact’.”

IAE’s current President is Jim Brown; a brief biography is provided below.

2019/2020 President of the Academy Dr. Jim Browne, B.E., M.Eng.Sc., Ph.D., D.Sc., MRIA, C.Eng. Dr. Browne is an experienced academic with over 30 years of academic leadership and service in the University of Manchester and the National University of Ireland Galway, where he served as President, Registrar, Dean of Engineering and a research leader. He has served on and led numerous Boards focusing on strategic direction, excellence in governance and the management of risk. He is currently Chairman of the Board of Children’s Health Ireland, and serves as an advisor on the NMBP programme within the EU H2020 programme. He has published 11 books, one of which was translated into Chinese and another into French, over 250 academic papers in international journals, and supervised over 40 PhD students. He has particular experience in working in the high-tech sector, including working with multi-partner industry – university research and development projects in Europe, the United States and China.

IAE’s current Chief Executive is Gabriel Dennison; a brief biography is provided below.

Gabriel graduated as a civil engineer at UCD and has nearly 40 years post-qualification experience. His early career was spent in local government in the Dublin region and consulting, here and overseas. He joined NTR pic in the late 1990s just as that company was diversifying into waste management and renewable energy and was actively engaged in board level roles in both sectors for many years. He moved into industry in the late 1990s and served in various senior management and leadership roles in the waste management and renewable energy sectors for over ten years. From 2012-2017 Gabriel was a Member of the Board of An Bord Pleanála (Irish Planning Appeals Board) and the subsidiary Strategic Infrastructure Board. Gabriel has a research Masters degree and PhD from University College Dublin in environmental engineering, has business qualifications from the University of Ulster (2003) and the Harvard

The Irish Academy of Engineering (IAE)
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Business School (2007). He was appointed an Adjunct Professor in engineering by UCD in 2012. Gabriel has been Chief Executive of the IAE since mid-2017.

Biographies for other members of IAE's leadership team and Council are provided in Appendix A of the full membership application.

CAETS Membership Criterion a) Representative of the engineering and technological community of that country.

The IAE is an all-island body; it operates in, and draws its membership from, both the Republic of Ireland and Northern Ireland. The Academy performs a valuable role in linking the profession in both jurisdictions on the island in matters of common interest and concern.

IAE's membership includes Fellows who have made significant contributions in areas as diverse as:

- Academia – University Presidents, Provosts, Vice Presidents, leaders of Research Institutes, Senior Professors of Engineering
- Public Sector – Directors, Senior Management, experts from Government Departments and Agencies, Utilities, Local Government
- Industry – CEOs, Presidents, Managing Directors, Directors, Vice Presidents
- Engineering Consultancy – Founders, Managing Directors, Directors

Its membership includes experts in many areas including high-tech, manufacturing, ICT, bio-pharma, medical devices, as well as established industries such as Construction, Materials, General Engineering and Primary Energy.

CAETS Membership Criterion b) Subscribe to the nonpolitical, non-governmental international character of the Council.

The IAE is a registered charity (incorporated not-for-profit). The **vision** of IAE is to contribute to the social, economic and technological development of Ireland, using the unique collective experience and knowledge of its members. Its **mission** is to provide an expert and independent resource to key decision-makers and the public on important issues requiring technological-economic solutions and a platform for informed debate and discussion.

The core of IAE's work is the preparation of independent, evidence-based assessments of engineering and technology-related issues of particular social and economic import. Examples of such publications include "Towards a Population of 6 Million – Implications for Spatial Strategy", "Future Engineering Education", "Ireland's Environment", "Transport in Ireland to 2050" and a review of future workforce requirements in "Engineering a Knowledge Island 2020." Other recent reports include "Future Energy Policy in Ireland", "Ireland at Risk – Adaptation for Climate Change" and "Infrastructure for an Island Population of 8 Million."

The IAE maintains links with international academies and engineering institutions worldwide. Given the nature of many of today's engineering challenges, the Academy recognizes the importance of transnational cooperation and is a full and active member of the European Council of Applied Sciences Technologies and Engineering (Euro-CASE).

The Irish Academy of Engineering (IAE)
SUMMARY: CAETS Membership Application
Received 4 March 2020

CAETS Membership Criterion c) Peer elected membership with criteria for election based on significant personal contributions to engineering, technological sciences, or related activities.

IAE gains new members via two paths: (1) membership automatically proffered to President and President Elect as well as to newly elected Honorary Fellows of Engineers Ireland and (2) members elected by the IAE Council from nominees submitted by IAE membership. Additional details are provided below.

[Excerpts from Irish Academy of Engineering (IAE) Rules and Procedures (version July 2016); provided in full in Appendix C of the IAE membership application.]

Article 3:...membership of the Academy shall consist of:

- (a) The President, the President Elect and past presidents of The Institution of Engineers of Ireland, now operating as Engineers Ireland;
- (b) Those Chartered Engineers who are included on the Roll of Honorary Fellows of The Institution of Engineers of Ireland.
- (c) Chartered Engineers of The Institution of Engineers of Ireland or Chartered Engineers resident in Ireland who by virtue of distinction and achievement are **elected** members of the Academy.
- (d) Engineers whose contribution to engineering is recognized as meriting **election**.
- (e) Fellows **elected** under the terms of Article 6(b) below.

Engineers Ireland Regulations: An Honorary Fellow shall be a person who is **distinguished by the importance of his/her work in engineering, science or otherwise, whom Engineers Ireland desires to honor**. An Honorary Fellow shall be elected by a majority of four-fifths of the members of the Council of Engineers Ireland present and voting.

Article 6

- (a) The members of the Academy shall normally be Chartered Engineers and Fellows of the Institution of Engineers of Ireland or Fellows of other institutions with which The Institution of Engineers of Ireland has bilateral agreements for the mutual recognition of the title of Chartered Engineer.
- (b) Additionally, up to 20% of the Fellows of the Academy may be elected under such conditions as the Council may deem appropriate from time to time and where the individuals concerned have reached an **exceptional level of competence and distinction in areas which are related to the advancement of engineering science**.

Article 4:

Election to membership of the Academy under Articles 3(c), 3(d) and 3(e) above shall be by proposal and approval of the Council. The Council shall establish rules of procedure which regulate the nomination, scrutiny and selection of candidates for election to membership of the Academy.

Procedure 8.3.1: The Council shall review annually the Academy's membership and decide on the maximum number of vacancies, if any, which in the year in question are to be filled by election under Article 4. *That is in addition to new members automatically admitted under Articles 3(a) and 3(b).*

The Irish Academy of Engineering (IAE)
SUMMARY: CAETS Membership Application
Received 4 March 2020

Procedure 8.3.2: The Membership Committee of Council shall examine nominations for election to membership under Articles 3(c), 3(d) and 3(e) and Article 6 above and make recommendations to Council on those candidates considered suitable for election.

Procedure 8.6.1: Not less than three months before nominations are to reach the Membership Committee the Secretary on behalf of Council shall invite Members of the Academy to nominate potential new members.

Procedure 8.6.2: **Nominations for membership of the Academy shall be made in writing by any one or more members**, other than by the President, the President Elect or members of the Membership Committee. Each nomination shall be accompanied by a summary CV of the nominee prepared or subscribed to and signed by the nominator or nominators if more than one. The nominee shall not be informed of the nomination, nor consulted in preparing the summary CV.

Procedure 8.6.6: **Council will decide on a confidential, provisional basis which nominees, if any, from the list may be offered membership.** This decision will be contingent on the Secretary approaching the nominee to seek assurances that the nominee if proffered membership will accept and will undertake to sustain and contribute to the work of the Academy.

Procedure 8.6.7: Following confirmation of receipt by the Secretary of the sought assurances, Council will finalize its decision on the nominees who are to be offered membership.

Procedure 8.6.8: Council shall inform Engineers Ireland of its decision and announce the names of the new members.

CAETS Membership Criterion d) Governed by its elected membership.

[Excerpts from Irish Academy of Engineering (IAE) Rules and Procedures (version July 2016); provided in full in Appendix C of the IAE membership application.]

Article 39: **The members of the Council shall be members of the Academy.**

Regulation 10.1.1: **The Academy shall be governed by a Council which shall be elected by the members of the Academy** in accordance with Regulation 10.3.

Regulation 10.3.1: Nominations for election to Council shall be supported by two members of the Academy and shall be in the form and according to the procedures prescribed by the Council from time to time.

Regulation 10.3.2: Election shall be by secret postal ballot of all the members of the Academy in accordance with the Rules of Procedure of the Academy.

CAETS Membership Criterion e) Engaged in significant activities demonstrating that its objectives are compatible with the objectives of CAETS (Bylaws Article 1).

The activities of IAE are structured around 4 outcomes; the percentage shown for each reflects 2018 activities:

1. Analyze (47%)

The Irish Academy of Engineering (IAE)
SUMMARY: CAETS Membership Application
Received 4 March 2020

- Conducting research for informed reports and peer review
- Production of reports by Standing Committees
- 2. Communicate (22%)
 - Dialogue and discussion fora
 - Promoting engineering heritage
 - Maintaining international links and promoting the modern image of Ireland
 - Fostering cross-border cooperation
- 3. Influence (21%)
 - Disseminating relevant information and expertise to assist policy makers
 - Launches of selected reports
- 4. Recognize (10%)
 - Honoring and encouraging Engineering achievement
 - Promoting engineering to youth
 - Hosting award ceremonies and events

The Academy operates through four Standing Committees each of which addresses key topic areas in engineering: Energy and Climate Action; Infrastructure; Enterprise, Innovation and Education; and Heritage.

2019 Publications included:

- Innovating for Growth – Improving Ireland’s Innovation Ecosystem
- Electricity Sensor Investment for Data Centres in Ireland
- Submission on draft Regional Spatial and Economic Strategy for Southern Region (IAE Southern Branch)
- Submission on draft Cork Metropolitan Area Transport Strategy (IAE Southern Branch)

CAETS Membership Criterion f) Financial support to pay the costs of CAETS membership and the costs of participation in CAETS activities.

“The Academy has provided in its budget for the cost of EURO-CASE membership and has provided, as part of its growth and development plan 2020-2023 for CAETS membership and the costs of participation in CAETS activities.”

IAE’s most recently audited financials (31 December 2018) reflect Capital and Reserves (Surplus Funds) of 49,974 Euros at the end of the year, compared with a surplus of 65,139 Euros at the end of 2017.

**CAETS Virtual Visiting Committee
Irish Academy of Engineering
Meeting Agenda**

**Friday, 2 October 2020
1300-1500 Dublin**

CAETS Participants

Tuula Teeri: CAETS Past-President, President of the Royal Swedish Academy of Engineering Sciences

Contact: tuula.teeri@iva.se, liv.svesse@iva.se; elin.elliott@iva.se

Panu Nykanen: CAETS Board Member, Secretary General of Finnish Academy of Technical Sciences

Contact: panu.nykanen@taf.fi, info@academies.fi

Ruth David: CAETS Secretary/Treasurer, Member of US National Academy of Engineering

Contact: ruth.a.david@outlook.com

IAE Participants

Dr. Jim Browne – President IAE and lately President, National University of Ireland, Galway

Mr. Tony Smyth – Immediate IAE past President and lately Chief Engineer, Office of Public Works

Mr. Bill Grimson – Honorary Secretary and lately Lecturer, Dublin Institute of Technology

Mr. Tom Leahy – Council Member and Regional Operations Manager, Irish Water plc

Dr. Gabriel Dennison, IAE Chief Executive

1300 Introductions (IAE and CAETS)

1310 IAE Membership Evolution

Application/Annual Report mentions recent authorization to increase membership as well as the member selection process, in particular, to address the gender balance and gaps in areas of expertise. Please discuss current demographics, highlighting areas of concern, and approaches under consideration for strengthening your Academy. (These challenges are shared by other CAETS Members)

1340 Collaboration with CAETS Member Academies

Your application mentions collaborations with Germany, Sweden, New Zealand, and the UK. Please briefly describe your interactions and experiences in establishing these relationships. In particular, do you believe CAETS membership will aid your efforts to establish bilateral relationships?

1410 Interest in CAETS Committees/Working Groups

CAETS currently has Committees/Working Groups focusing on Energy, Communicating with the Public, Engineering Education, Sustainability, Diversity and Inclusion, and COVID-19 (newly established). There appears to be some alignment between the CAETS activities and your Standing Committees. Please discuss your interests and activities relating to the CAETS Committees/Working Groups.

1440 General Discussion

What questions do you have about CAETS?

1500 Adjourn

**Application for CAETS Membership: Irish Academy of Engineering
Virtual Visiting Committee Report
ZOOM Meeting: 2 October 2020**

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Tuula Teeri, CAETS President
Panu Nykanen, CAETS Board Member
Ruth David, CAETS Secretary/Treasurer

IAE Participants

Jim Browne, IAE President
Bill Grimson, IAE Past-President
Tom Leahy, IAE Council Member
Gabriel Dennison, IAE Chief Executive

CAETS Visiting Committee Recommendation to Council

The Irish Academy of Engineering fully satisfies the CAETS membership criteria as established in the Bylaws and would be an engaged and valued addition to CAETS membership.

Background

The IAE submitted a membership application on 4 March 2020. The full application is posted on the CAETS website (Members Only section); a summary was included with Council materials. Due to travel restrictions stemming from COVID-19, the Executive Committee agreed that a virtual visiting committee would be formed to perform due diligence on behalf of CAETS. The committee members (noted above) reviewed the full application and agreed to focus the discussion around three topics: 1) IAE Membership Evolution; 2) Collaboration with CAETS member academies; and 3) Interest in CAETS Committees/Working Groups. A summary of those discussions is provided below.

Evolution of IAE Membership

The Irish Academy of Engineering was founded as an independent corporate body with the assistance of Engineers Ireland, which is the professional society for all engineers in Ireland. Engineers Ireland has approximately 25,000 members spanning all engineering disciplines; the organization accredits universities, charters engineers, and provides a variety of member services. The motivation behind establishment of IAE was to create a relatively small and highly exclusive independent body to provide advice and comment on engineering-related public policy issues. IAE's current membership segmentation includes approximately 55% industry, 25% academia, and 20% public service so it is well-equipped to provide such advice.

IAE benefits from a close working relationship with Engineers Ireland but receives no financial support from that body. IAE is funded by membership subscriptions, patrons, and philanthropic contributions.

Current IAE membership is approximately 160; total membership is limited to 200. IAE's governing body is its Council, which is member-elected.

Application for CAETS Membership: Irish Academy of Engineering Virtual Visiting Committee Report ZOOM Meeting: 2 October 2020

IAE has both honorary members and elected members. The number of honorary members is small (approximately 5-6); these individuals typically were actively engaged in the establishment of IAE or have been elected President or designated Honorary Fellow by Engineers Ireland. Although nomination of honorary members does not follow the general election process, the Council retains the final decision regarding membership. IAE's membership selection process is strongly focused on identifying well-qualified individuals who are willing to commit to supporting the academy's work in informing public policy.

Each year the Council sets target criteria for new member nominations (exceptionally qualified individuals are always considered), seeking to build a balance across engineering disciplines, individual diversity, and geographic diversity, and invites current IAE members to nominate individuals who have reached an exceptional level of competence and distinction in areas which are related to the advancement of engineering science. The process is confidential; the nominator must know the individual as well as their field well enough to evaluate contributions.

Applications are reviewed first by a Membership Committee (appointed by the Council), which makes recommendations to the Council for final decisions regarding which nominees are to be offered membership. Typically, 8-9 new members are elected each year.

Given its origins, IAE membership was initially dominated by civil engineers. Ireland's economy is today quite multi-disciplinary so IAE leadership is attentive to the need to ensure that the academy's membership is equally multi-disciplinary. When advice from social/behavioral sciences is vital to their ability to inform public policy, IAE collaborates with the Royal Irish Academy to gain access to the necessary expertise. At present, IAE's biggest shortfall is in gender diversity.

Collaboration with CAETS Member Academies

Ireland is a small but very globalized economy with a diverse industrial base including device manufacturing and software development. The country has long been active globally, recognizing that big problems cannot be solved nationally. Ireland is active in European Union as well as United Nations efforts, and IAE members are heavily engaged in international activities. Ireland's government is strongly focused on global benchmarking, so IAE positions itself to help advise those efforts.

IAE leadership emphasized that their greatest motivation for CAETS membership is to engage more widely with other academies around the world – to learn from them as well as to share information about IAE activities and issues.

IAE already has some connections to CAETS member academies. They share membership with the UK (most Northern Ireland members are also RAEng members) and maintain a warm relationship with RAEng. They attended a recent Global Grand Challenges for Engineering Summit that was sponsored by the UK RAEng, US NAE, and China's CAE. They have some joint

Application for CAETS Membership: Irish Academy of Engineering
Virtual Visiting Committee Report
ZOOM Meeting: 2 October 2020

Fellows with acatech and have visited their headquarters. IAE noted that their economy has significant similarities with those of New Zealand. IAE members also have strong university relationships in China. IAE is eager to build stronger and more diverse connections across CAETS member academies.

Interest in CAETS Committees/Working Groups

IAE operates with 3 general committees: Membership, Patron Relations, and Communications; several regional committees; and 4 Standing Committees that meet quarterly:

- Energy and Climate Change
- Infrastructure
- Enterprise Innovation and Education
- Heritage of Engineering (preserve the past and inform the future)

They see obvious connections with CAETS' current committees in Communicating with the Public, Energy, Sustainability/SDGs, and Engineering Education and are eager to engage in those as well as future CAETS activities.