



Executive Committee Meeting Agenda

Thursday, April 12, 2018 – 9:00—10:30 am

Madrid, Spain: 2:00—3:30 pm

Stockholm, Sweden: 2:00—3:30 pm

SKYPE: lucio.caceres49

National Academy of Engineering of Uruguay

Montevideo, Uruguay

EXCOM Members

Acad. Eng. Lucio Cáceres (President)

Dr. Elías Fereres (Past-President)

Dr. Tuula Teeri (President-Elect)

Dr. Ruth David (Secretary/Treasurer)

1. Welcome and approval of agenda
 2. Approval of ExCom Minutes of 13 November 2017
 3. Report of the Secretary/Treasurer
 - a. 2018 Dues Status
 - b. 2018 Board Nominees
 4. 2018 CAETS Annual Meeting: 10-14 September 2018, Montevideo, Uruguay
 - a. Status Update: ANIU
 - b. Proposed Schedule of Meetings: Secretary/Treasurer
 5. 2019 CAETS Annual Meeting: 24-28 June 2019, Stockholm, Sweden
 - a. Status Update: IVA
 6. 2020 CAETS Annual Meeting: Korea
 7. Pakistan Membership Application
 - a. Due Diligence
 - b. On-Site Visit
 8. New Business
- Adjourn



Executive Committee Meeting Minutes

Monday, November 13, 2017 – 10:00—12:00

Real Academia de Ingeniería
Calle Don Pedro, 10, 28005 Madrid, España

Participation

EXCOM Members:

- Dr. Elías Fereres (President)
- Dame Ann Dowling (Past-President)
- Acad. Eng. Lucio Cáceres (President-Elect)
- Dr. Ruth David (Secretary/Treasurer)

Guests:

- Hugh Barlow, ATSE
- Matt Wenham, ATSE
- Samantha Frost, RAEng
- Andrew Clark, RAEng
- Shane McHugh, RAEng
- Adriana Gamboggi, ANIU
- István Králik, Hungary
- Magnus Breidne, IVA

1. Welcome and approval of agenda

- a. Remembrance: William J. Salmon

The president welcomed attendees to the Real Academia de Ingeniería facilities. He then offered praise for the long service of Bill Salmon, saying that Bill “caused CAETS to work – he was CAETS.” The agenda was approved as presented.

2. Approval of ExCom Minutes of 7 March 2017

The minutes of the March meeting were approved as presented. Regarding the London 2016 Statement, Dame Ann Dowling indicated that the primary product of the convocation was a video that has been widely viewed. A brief statement was posted on the RAEng website, but it has not yet been circulated to CAETS members; the Secretary/Treasurer will seek Council endorsement of the statement.

3. Report of the Secretary/Treasurer

- a. 2017 Dues Status
- b. 2018 Board Nominees
- c. 2019 Dues Schedule (3% increase previously approved)

The Secretary/Treasurer reported that all member countries had paid 2017 dues and that prior delinquencies had been remedied. Biographies for 2018 Board nominees were provided for information: Tuula Teeri (President-elect), IVA; Roger McCarthy, US NAE; Lucas P. J. J. Noldus,

AcTI.nl; Stane Pejovnik, IAS; István Králik, Hungary. The 2019 dues schedule, based on the previously approved 3% increase was provided for information.

4. 2017 Convocation: Challenges of the Bioeconomy

a. CAETS 2017 Statement

The president briefly reviewed the program for the 2017 Convocation, observing that a broad array of topics was being addressed; he observed that they had worked hard to attract young professionals. The statement will be drafted after the meeting.

5. 2018 CAETS Annual Meeting: 10-14 September 2018, Montevideo, Uruguay

The President-elect indicated that planning was well-underway for the 2018 meeting. A technical committee had been formed, the venue was booked, and logistics were organized. The key theme for the convocation is sustainable agriculture and forestry, which is of critical importance to Uruguay as well as other nations that are commodity producers in this industry. The program is being organized under the general theme of “Engineering a Better World.” CAETS member countries will be invited to provide speakers; he also will target outreach to other Spanish-speaking countries, hoping to increase their participation in CAETS.

6. 2019 CAETS Annual Meeting: 24-28 June 2019, Stockholm, Sweden

Magnus Breidne, IVA, provided a brief information item regarding planning for the 2019 annual meeting. A local organizing committee has been formed; CAETS member academies will be invited to participate. IVA is celebrating its 100th Anniversary in 2019 so it has adopted a cross-cutting theme for the meeting of “Engineering A Better World – the Next 100 Years!!”

7. New Business

No new business was introduced.

Transition to Closed Session

8. Change to Bylaws (CAETS membership)

The previously agreed upon Bylaws change was endorsed for presentation to the Council:

ARTICLE 2 – Council Membership

Section 4 – Procedures for Admission of New Members

Applications for admission will normally be accepted for consideration no earlier than three years after the official date of establishment of the applicant, with Council flexibility for up to 5 years in its discretion.

9. Membership Application Pending: Pakistan

a. Visiting Committee

After discussion, EXCOM Members agreed that alternate due diligence mechanisms would be used to satisfy that Pakistan had met CAETS membership requirements in lieu of an on-site visit.



Executive Committee Meeting Minutes

Council members would be polled for their assistance in making queries; such due diligence would be conducted well in advance of the 2018 meeting.

10. Membership Application Update: New Zealand

A brief information item was provided regarding the restructuring underway in the New Zealand Academy to enable the Engineering component to apply for CAETS membership.

11. CAETS Membership Expansion

EXCOM members briefly discussed potential opportunities to expand CAETS membership in Asia, Latin America, Europe, and Singapore. The Secretary/Treasurer agreed to solicit inputs from CAETS members and compile relevant information prior to the 2018 annual meeting.

The CAETS EXCOM meeting was adjourned.

**CAETS Executive Committee Meeting
Thursday, April 12, 2018**

Agenda Item 4.b – Proposed Schedule of Meetings

The current program includes an Executive Committee Meeting on Monday morning, followed by the Board Meeting Monday afternoon and the Council Meeting on Thursday. This sequence has become the norm.

It has been observed that there is a great deal of repetitive content among these three meetings, and also that there might be some benefit to schedule some time for CAETS committees or task forces to meet separately.

During the meetings in Madrid, several topics were identified as being of interest to CAETS members:

- *How do engineering academies interact with the public? Are there best practices that can be distilled from CAETS Member academies? What might CAETS do to communicate the value of engineering to society, policy-makers, and other stakeholders?*
- *Engineering education—is it changing? Is quality improving? Are new technologies being used? Are curricula changing? How are topics like project-based education, multi-disciplinary education, and innovation being integrated?*
- *Engineering for Sustainable Development Goals*

Two of these topics – Engineering Education and Engineering for Sustainable Development Goals – were discussed as potential new CAETS Committees.

Additionally, we have an open question from the Diversity discussion with regard to whether member academies are interested in implementing the framework introduced by the RAEng to assess their organization's progress in promoting diversity and inclusion, and, if so, whether we should form a task force to share lessons learned.

An alternative meeting schedule for the 2018 and future CAETS Annual Meetings might include holding the EXCOM Meeting by telecon 2-3 weeks in advance of the Annual Meeting, scheduling work group meetings (self-identified by topic) on Monday morning, holding the Board Meeting Monday afternoon, and the Council Meeting on Thursday. [An alternate schedule would be to hold both the Board Meeting and Council Meeting on Thursday, while dedicating Monday entirely to small group discussions.]

In this format, academies would be solicited within the next few weeks for their interest in the various topics, and a 'lead' (or co-leads) would be recruited for each. An agenda would be developed for each group discussion, and the Council agenda would include an 'out-brief' from each, to include next steps (if any).

Additionally, I would focus the Board discussion more explicitly on reviewing/refining requirements for an updated CAETS website that could more effectively support such

collaborative efforts. (I have not moved forward with an upgrade as it seems apparent that we would benefit from a collective agreement regarding functionality.)

If the EXCOM prefers to retain the current meeting schedule, I will work within that program to reduce the redundancy among the various agendas and to maximize the time for discussion.

Agenda Item 7 – Pakistan Membership Application

CAETS Bylaws: Section 3 Criteria for Membership A member of CAETS shall:

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

a. Due Diligence

- i. Pakistan Academy of Engineering (PAE) was registered on 20 December 2013; the attached brochure describes the goals of the PAE, which are consistent with the first two criteria.
- ii. PAE has 10 Founding Fellows (signatories to the Memorandum of Association of the PAE) and 37 Fellows in total. A CV for President Jameel Ahmad Khan and a list of fellows are attached (I have reviewed online information for most fellows and qualifications are consistent CAETS criteria). Peer elections are described in PAE Bylaws and are consistent with CAETS criteria:

The academy shall comprise the Pakistan's most eminent engineers of all disciplines having at least a PhD or equivalent degree in engineering from a recognized institution...these Fellows shall be elected from the nominees being proposed by the Fellows and Foreign Fellows.....the fellowship shall be interpreted to include important or unusual personal contributions or accomplishments and may be to specific technical areas in the integration of technologies, in the noteworthy leadership of a group involved in significant innovation of technological progress ...

- iii. The PAE is governed by its elected membership. According to its Bylaws:

The highest decision-making body shall be the Assembly of the Academy, which shall comprise its Founding Fellows and Fellows. The Assembly shall take decisions in matters of great weight and decisive importance to the Academy. The Assembly shall make, amend and notify the bylaws, the rules and the regulations relating to the organization and activities of the Academy.

The direction of the management of the Academy shall be exercised by its Council, which shall be elected in the Assembly of the Academy. The direction, aims and objectives of the management of the affairs of the Academy and the control and disposition of its properties and funds shall vest in the Council, who shall have full power to manage the Academy in every respect...

- iv. PAE's website lists a series (past and planned) of symposia and meetings that are consistent with CAETS objectives:

November 3, 2018: The 11th Symposium titled "Our Mineral Resources – the Most Neglected Sector"

April 28, 2018: The 10th Symposium titled "Prospects of Mini Nuclear Power Plants in Pakistan"

February 3, 2018: A session of the Knowledge Forum was held to discuss the theme "Business Strategy for Engineering Organizations in Pakistan"

January 20, 2018: 11th Meeting of the Council of the Pakistan Academy of Engineering

January 3, 2018: 8th Meeting of the Council of PAE-Endowment Fund

December 16, 2017: Ninth Symposium of the Pakistan Academy of Engineering titled
“Cybersecurity – Where do we stand?”

PAE has identified ten grand challenges “to be addressed by the Engineering Community of Pakistan:

Prospects of E-MOBILITY in Karachi

Engineering and Health Care Nexus in Pakistan

Industrial Renaissance and Competitiveness for Pakistan

Drinking Water

Coal-to-Liquids (CTL) Technology for Pakistan

Construction Industry and the Economy in Pakistan

Emerging Technologies and their Applications in Pakistan

Waste Water Treatment and Application of Membrane Technologies for Pakistan

Hydrogen Energy – the Future Engineering Vector for Pakistan

University – Industry Linkage in Pakistan

PAE’s activities appear to be aligned with CAETS Criteria.

- v. PAE has attended CAETS Annual Meetings as an observer for several years. Audited Financial Statements for 2017 are attached.

b. On-Site Visit

Frank Behrendt, acatech, will visit the PAE in Karachi on May 1-3 for on-site due diligence. The draft agenda is attached, the schedule is still being finalized.



The Pakistan Academy of Engineering

**AUDITED
FINANCIAL STATEMENTS
OF
THE PAKISTAN ACADEMY OF ENGINEERING
FOR THE YEAR ENDED JUNE 30, 2017**

AUDITED
FINANCIAL STATEMENTS
OF
PAKISTAN ACADEMY OF ENGINEERING
FOR THE YEAR ENDED JUNE 30, 2017



Chartered Accountants

KARACHI OFFICE :
Suites : 717 & 718, Caesars Tower,
Shahra-e-Faisal, Karachi.
Tel : (021) 32791966-8
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website : www.qaviandco.com

AUDITORS' REPORT TO THE MANAGING COMMITTEE

We have audited the financial statements of PAKISTAN ACADEMY OF ENGINEERING ("The Society"), which comprise of the balance sheet as at June 30, 2017 and the receipts and payments account, statement of changes in funds and statement of cash flows for the year then ended including summary of significant accounting policies.

Managements' Responsibility for the Financial Statements

The Managing Committee of the Society is responsible for the preparation and fair presentation of the financial statements in accordance with the approved accounting and reporting standards as applicable in Pakistan and for such internal control as the Management of the Society determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with the approved auditing standards as applicable in Pakistan. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgement, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control, relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by the Management Committee of the Society, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the financial statements give a true and fair view of the financial position of PAKISTAN ACADEMY OF ENGINEERING as at June 30, 2017 and of its financial performance and its cash flows for the year then ended in accordance with approved accounting standards as applicable in Pakistan.

KARACHI

DATED:

21 JUL 2017

Qavi & Co.

Qavi & Co.

CHARTERED ACCOUNTANTS

Engagement Partner : Khalid Anwer

PAKISTAN ACADEMY OF ENGINEERING

BALANCE SHEET AS AT JUNE 30, 2017

	Note	2017 Rupees	2016 Rupees
ASSETS			
Current Assets			
Loans & advances	4	1,517,718	460,407
Balances with statutory authorities	5	180,780	165,822
Cash and bank balances	6	5,259,581	184,439
TOTAL ASSETS		<u>6,958,079</u>	<u>810,668</u>
FUNDS AND LAIBILITIES			
FUNDS			
Opening Balance		810,439	916,203
Add: Surplus/ (Deficit) for the year		6,147,640	(105,764)
Balance at the end of the year		<u>6,958,079</u>	<u>810,439</u>
Liabilities			
Current Liabilities			
Accrued liability		-	229
TOTAL FUNDS & LIABILITIES		<u>6,958,079</u>	<u>810,668</u>

The annexed notes 1 to 14 form an integral part of these financial statements


Chairman


Treasurer

67

PAKISTAN ACADEMY OF ENGINEERING

RECEIPTS AND PAYMENTS ACCOUNT FOR THE YEAR ENDED JUNE 30, 2017

	Note	2017 Rupees	2016 Rupees
Receipts	7	8,541,830	1,420,939
Payments made against restricted funds	8	<u>(2,228,267)</u>	<u>(995,310)</u>
		6,313,563	425,629
Payments made against unrestricted funds	9	<u>165,923</u>	<u>531,393</u>
Net Surplus / (Deficit) for the year		<u><u>6,147,640</u></u>	<u><u>(105,764)</u></u>

The annexed notes 1 to 14 form an integral part of these financial statements


Chairman


Treasurer

PAKISTAN ACADEMY OF ENGINEERING

CASH FLOW STATEMENT FOR THE YEAR ENDED JUNE 30, 2017

	Note	2017 Rupees	2016 Rupees
CASH FLOW FROM OPERATING ACTIVITIES			
Net Surplus / (Deficit) for the year		6,147,640	(105,764)
Effect on cash flow due to working capital changes			
(Increase) / Decrease in current assets			
Loans and advances		(1,057,311)	(162,022)
Advance tax		(14,958)	(5,630)
		(1,072,269)	(167,652)
Increase / (Decrease) in current liability			
Accrued liability		(229)	(1,782)
Net cash flow from Operating Activities		5,075,142	(275,198)
Cash and cash equivalents at beginning of the year		184,439	459,637
Cash and cash equivalents at the end of the year		5,259,581	184,439

The annexed notes 1 to 14 form an integral part of these financial statements


Chairman


Treasurer

PAKISTAN ACADEMY OF ENGINEERING

STATEMENT OF COMPREHENSIVE INCOME FOR THE YEAR ENDED JUNE 30, 2017

	2017 Rupees	2016 Rupees
Net Surplus / (Deficit) for the year	6,147,640	(105,764)
Other comprehensive income	-	-
Total comprehensive income for the year	<u>6,147,640</u>	<u>(105,764)</u>

The annexed notes 1 to 14 form an integral part of these financial statements


Chairman


Treasurer

PAKISTAN ACADEMY OF ENGINEERING

STATEMENT OF CHANGES IN FUND FOR THE YEAR ENDED JUNE 30, 2017

	Unrestricted Fund	Total
	Rupees	Rupees
Balance as at July 01, 2015	916,203	916,203
Deficit for the year - 2016	(105,764)	(105,764)
Balance as at June 30, 2016	810,439	810,439
Surplus for the year - 2017	6,147,640	6,147,640
Balance as at June 30, 2017	6,958,079	6,958,079

The annexed notes 1 to 14 form an integral part of these financial statements


Chairman


Treasurer

PAKISTAN ACADEMY OF ENGINEERING

**NOTES TO AND FORMING PART OF THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED JUNE 30, 2017**

1. NATURE AND STATUS OF ASSOCIATION

1.1 Pakistan Academy of Engineering ("Society") is a non-political, non-religious and a non-commercial society which is duly registered under Societies Act XXI of 1860 on December 20, 2013. The registered office is situated at Ground Floor, plot No.39-C, Commercial Street, Phase-2(Ext) DHA, Karachi. The society is operating vide its head office located on E 16/2, Block 7, Gulshan-e-Iqbal, Karachi. The objective of the society is to pursue, encourage and maintain excellence in the entire field of engineering in order to promote advancement of science, art and practice of engineering for the benefit of Pakistani nation and to provide national forum for the discussion of engineering and technical issues as per detailed Memorandum of Association.

1.2 Following is the list of projects along with the names of Donors which have been completed during the year.

Project Name	Donor
Preliminary Study for Thal Coal Utilization	The Institute of Applied Energy, Japan
Additive Manufacturing	Principal Builders- Engineers & Contractors
Innovative Thar Coal Value Chain	Pakistan Academy of Engineering

2. BASIS OF PREPARATION

2.1 Statement of Compliance

These financial statements have been prepared in accordance with approved accounting standards as applicable in Pakistan. Approved accounting standards comprise of Accounting and Financial Reporting Standards for Small-Sized Entities (SSEs) applicable to non-corporate entities issued by the Institute of Chartered Accountants of Pakistan, as are notified under the Companies Ordinance, 1984, provisions of and directives thereunder. In case requirements differ, the provisions or directives of the Companies Ordinance, 1984 shall prevail.

2.2 Accounting Convention

These financial statements are prepared under historical cost convention without any adjustment for the effect of inflation or current values.

2.3 Functional and presentation currency

These financial statements are presented in Pak Rupee, which is the functional and presentation currency for the Society.

3. SIGNIFICANT ACCOUNTING POLICIES

The principal accounting policies applied in the presentation of these financial statements are set out below. These policies have been consistently applied to all the years presented, unless otherwise stated. (1)

3.1 Loans and Advances

These are stated at cost less estimates made for doubtful balances based on a review of all outstanding amounts at the balance sheet date. Balances considered bad and irrecoverable are written off when identified.

3.2 Cash and cash equivalents

For the purposes of cash flow statement, cash and cash equivalents consist of cash in hand and balances with banks.

3.3 Fund

The accounts of the Society are maintained in accordance with the principals of fund accounting. Under these principles, resources are classified for accounting and reporting purposes, into funds that are in accordance with activities specified by the donor. In the financial statements of the Society, two main groups of funds are distinguished which are Un-restricted Funds and Restricted Funds.

3.3.1 Un-restricted Funds

Funds received for on-going operations, without any restrictions are classified as Un-restricted funds. Unrestricted grants / contribution received are recognized as receipts in the year of receipts.

3.3.2 Restricted Funds

Funds received for specific purposeS are classified as restricted funds with separate accounting records being maintained for each account.

Restricted fund representing donation and related other receipts and cost recoveries are classified as restricted balances payments made. Out of restricted funds are reflected in the financial statements, with equal amount being recognized as payment and reflected as funds utilized. Funds utilized for capital expenditure are transferred to the deferred capital grant account, with an amount equal charged for depreciation on assets so purchased being released from this account and recognized as receipts in the financial statements.

3.4 Trade and other payables

Liabilities for trade and other amounts payable are carried at cost which is the fair value of the consideration to be paid in the future for the goods and services rendered, whether billed or not to the Society.

3.5 Receipts

Unrestricted grants / contribution received are recognized as receipts in the year of receipts.

Restricted funds are recognized as receipts to the extent of actual expenses incurred during the year. Where funds received are in excess of actual expenses, the balances are carried forward as un-utilized fund. Funds which involve funding for property, plant and equipment to be utilized in the projects are deferred and amortized over the estimated useful lives of related assets.

Restricted funds received in kind for capital expenditure where ownership of assets is transferred, are recognized as property and equipment by crediting "deferred capital grant" at fair values.

For ongoing projects and programmes, for which the funding has been agreed at the end of the reporting period is recognized as grant receivable to the extent of expenditure incurred.

Donations other than donors' grants to carry out specific projects, are recognized as and when received.

3.6 Provisions

Provisions are recognized when the Society has a present legal or constructive obligation as a result of past events and it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation and a reliable estimate of the obligation can be made.

3.7 Taxation

The Society has applied for registration with the income tax authorities as not for profit organisation under section 2(36) of the Income Tax Ordinance, 2001 read with Rule 211 of the Income Tax Rules, 2002. The Society does not account for taxation, as not for profit organisations are allowed a tax credit equal to one hundred percent (100%) of the tax payable including minimum tax and final tax payable, under section 100C of the Income Tax Ordinance, 2001.

3.8 Related party transactions

Transactions with related parties is based at arm's length using normal commercial rates on the same terms and conditions as third party transactions.

3.9 Foreign currency translation

Foreign currency transactions are translated into Pak Rupees using the exchange rates prevailing at the dates of the transactions. Monetary assets and liabilities in foreign currencies are translated into Pak Rupees using the exchange rate at the balance sheet date. Foreign exchange gains and losses resulting from the settlement of such transactions and from the translations at the year end exchange rates of monetary assets and liabilities denominated in foreign currencies are taken to receipts currently.

3.10 Cash and bank balances

Cash in hand and at bank are carried at nominal amount.

3.11 Significant accounting judgements and critical accounting estimates / assumptions

The preparation of financial statements in conformity with approved accounting standard requires the management to:

- exercise its judgement in process of applying the Society's accounting policies
- use of certain critical accounting estimates and assumptions concerning the future.

Closed out projects

Assets and liabilities of the projects closed out during the year are transferred to the Society's assets and liabilities and their fund balances are transferred to the Society's fund balance unless stated otherwise in agreement.

4. This represents amount receivable from Pakistan Academy of Engineering - Endowment Fund (an Associated Undertaking) on account of revenue and capital expenditure incurred by the Society on their behalf.

	2017 Rupees	2016 Rupees
5. BALANCES WITH STATUTORY AUTHORITIES		
Income tax refundable	165,822	160,192
Advance income tax	14,958	5,630
	<u>180,780</u>	<u>165,822</u>
6. CASH & BANK BALANCES		
Cash in hand	19,282	26,748
Cash at bank	5,240,299	157,691
	<u>5,259,581</u>	<u>184,439</u>
7. RECEIPTS		
Donation - 7.1	159,170	123,339
Programme revenue - 7.2	8,382,660	1,297,600
	<u>8,541,830</u>	<u>1,420,939</u>

- 7.1 This represents donation received from Mr. Shahid Alam for payment of salary and other revenue expenditures.
- 7.2 This represents grant received from individuals, associations & institutions for programs, symposiums & feasibility studies. Also refer note - 1.2

	2017 Rupees	2016 Rupees
8. EXPENDITURE INCURRED ON RESTRICTED PROJECT		
Feasibility studies	345,623	-
Travelling and conveyance	1,342,000	-
Symposium expenses	540,644	995,310
	<u>2,228,267</u>	<u>995,310</u>

	2017 Rupees	2016 Rupees
9. EXPENDITURE INCURRED ON UNRESTRICTED PROJECT		
Printing, stationery and office supplies	22,381	13,889
Staff cost - 91	-	125,400
Communication, electricity, gas and water - 9.1	-	41,125
Security and conservancy -9.1	-	13,800
Repair and maintenance	22,660	-
Rent, rates and taxes - 9.1	-	228,000
Postage	43,721	44,257
Travelling and conveyance	-	26,090
Entertainment	71,334	31,800
Others	5,827	7,032
	<u>165,923</u>	<u>531,393</u>

9.1 The expenses for the year ended June 30, 2016 , have been equally apportionated between Pakistan Academy of Engineering and Pakistan Academy of Engineering Endowment Fund. Following are the details of gross expenses:

Staff Cost	-	250,800
Communication, electricity, gas and water	-	82,250
Security and conservancy	-	27,600
Rent, rates and taxes	-	456,000

9.2 The item of expenses for the year ended June 30,2017, mentioned in note 9.1, have been completely borne by the Pakistan Academy of Engineering Endowment Fund as decided by the council , Governing body , Pakistan Academy of Engineering.

10. FINANCIAL RISK MANAGEMENT OB. FINANCIAL RISK MANAGEMENT OBJECTIVES AND POLICIES

10.1 Risk management policies

The Society's objective in managing risks is the creation and protection of members interest. Risk is inherent in the Society's activities, but it is managed through a process of ongoing identification, measurement and monitoring, subject to risk limits and other controls. The process of risk management is critical to the Society's continuous sustainable financial position. The Society is exposed to credit risk, liquidity risk and inherent rate risk arising from the financial instruments it holds.

The Society finances its operations through grant proceeds and management of working capital with a view to maintaining an appropriate mix between various sources of finance to minimize risk.

10.2 Credit risk

Credit risk represents the accounting loss that would be recognized at the reporting date if counter parties fail completely to perform as contracted. All financial assets except cash in hand are subject to credit risk.

10.3 Exposure to credit risk

The carrying amounts of the financial assets represent the maximum credit exposures before any credit enhancements. The carrying amounts of financial assets exposed to credit risk at the reporting date are as under:

	2017 Rupees	2016 Rupees
Loans and advances	1,517,718	460,407
Bank balance	5,240,299	157,691
	<u>6,758,017</u>	<u>618,098</u>

10.4 Interest rate risk

Interest rate risk is the risk that the value of financial instruments will fluctuate because of changes in market interest rates. At the balance sheet date the Society has no variable interest rate liability.

	Interest bearing			Non-interest bearing			Total
	Maturity up to one year	Maturity after one year	Total	Maturity up to one year	Maturity after one year	Total	
← Rupees →							
Financial assets							
Loans and advances	-	-	-	1,517,718	-	1,517,718	1,517,718
Cash and bank balances	-	-	-	5,259,581	-	5,259,581	5,259,581
June 30, 2017	-	-	-	6,777,299	-	6,777,299	6,777,299
June 30, 2016	-	-	-	644,846	-	644,846	644,846
Financial liabilities							
Accrued liabilities	-	-	-	-	-	-	-
June 30, 2017	-	-	-	-	-	-	-
June 30, 2016	-	-	-	229	-	229	229
On balance sheet gap							
June 30, 2017	-	-	-	6,777,299	-	6,777,299	6,777,299
June 30, 2016	-	-	-	644,617	-	644,617	644,617

10.5 Liquidity risk

Liquidity risk is the risk that the Society will encounter difficulty in meeting its financial obligations as they fall due. The Society's approach to managing liquidity is to ensure, as far as possible, that it will always have sufficient liquidity to meet its liabilities when due, under both normal and stress conditions, without incurring unacceptable losses or risking damage to the Society's reputation.

11. TRANSACTIONS WITH RELATED PARTIES

The Society in normal course of operations carries out transactions with related parties which normally include key management personnel, trustees & associated undertakings. Transactions with related parties undertaken during the year were as follows:

Relationship with the Society	Nature of transaction	2017	2016
		Rupees	Rupees
Associated undertaking	Staff cost	-	125,400
Associated undertaking	Utility expenses	-	41,125
Associated undertaking	Property, plant and equipment	-	15,300
Associated undertaking	Rent, rates and taxes	-	228,000
Associated undertaking	Security & conservancy	-	13,800

12. CORRESPONDING FIGURES

Corresponding figures have been rearranged and reclassified, wherever necessary for the purpose of comparison and for better presentation. However, no significant reclassification has been made during the year.

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	2017	2016
13. NUMBER OF EMPLOYEES		
Number of employees as at June 30	-	2

14. DATE OF AUTHORIZATION FOR ISSUE

These financial statements were approved and authorized for issue on July 21st, 2017 in the fourth Annual Aeeembly Meeting of Pakistan Academy of Engineering.


Chairman


Treasurer

9

إِنَّا كُلَّ شَيْءٍ خَلَقْنَاهُ بِقَدَرٍ ۝



**Pakistan Academy
of
Engineering**

ESTABLISHMENT

- During the later half of the twentieth century practically all major industrially developed nations established academies of engineering and technology, reflecting the growing importance of technologies for the economic and social welfare. This was accomplished despite the fact that academies of sciences already existed.
- It was recognized globally that engineering and technology are the key components of national and international efforts to achieve environmentally sustainable economic development.
- In our country there is a pressing need to provide leadership in the engineering profession in service of the nation and to debate and articulate the implications/ of rapid technological change affecting the life of the people.
- It is desirable to promote public understanding of engineering and public engagement for improving the policy formation process.
- There is need to recognize the eminent engineers and marshal their knowledge, experience and wisdom for the benefit of the nation.
- As there exists no other voluntary, non-government, independent, self-managed learned organization for such purposes, the founder fellows, considered it expedient to establish a society by the name and style of the Pakistan Academy of Engineering under the Societies Registration Act, 1860.
- The Academy was registered on December 20, 2013 at Karachi. Concurrently, Pakistan Academy of Engineering Endowment Fund, a trust, has also been established and registered under the Societies Registration Act, 1860, with the sole objective of generating funds and providing financial support to the Pakistan Academy of Engineering on a continuing basis.

AIMS & OBJECTS

The Pakistan Academy of Engineering shall be a Learned Society and composed of elected members active in the engineering profession in the areas wherever applied. Following shall be the main aims and objects of the Academy.

- To pursue, encourage and maintain excellence in the entire field of engineering in order to promote the advancement of the science, art and practice of engineering for the benefit of the Pakistani nation.
- To provide national forum for the discussion of engineering and technological issues.
- To promote the application of emerging technologies for the benefit of Pakistani nation.

- To provide independent advice on issues of engineering and technology that underly many questions of national importance.
- To promote the technological welfare of the nation by utilising the knowledge and insight of eminent members of the engineering profession.
- To bring together the country's most eminent engineers from all disciplines and identify strategic priorities to enhance Pakistan's engineering capabilities and to lead debate by guiding informed thinking and influence public policy.
- To promote network of highly experienced and competent professionals in the field of engineering, who seek to stimulate contacts between disciplines and across national borders.
- To advise the Government and also conduct its own independent studies that examine important topics in engineering and technology.
- To engage more efficiently with the public and public policy process. To encourage cooperation with international engineering efforts.
- To interact with the professional bodies in engineering and scientific academies in Pakistan and abroad.
- To promote strengthening and integration of academia, industry, government and society in the country.
- To promote creation of engineering culture in the country.
- To honour outstanding engineers of the country, encourage their innovations and institute awards in recognition of their extraordinary contribution to the engineering profession in education, management, research, practice and overall impact on the society.
- To institute and establish Professorships, Studentships, Scholarships, Awards and other Benefactions.
- To function as initiator, catalyst, coordinator and opinion moulder.
- To run the Association on non-political, non-commercial and non-religious basis.
- The Association shall purely run on charitable basis.
- The Association shall confine its activities only to the aims and objects of the Association as set forth in the Memorandum of Association and the income and property of the Association from whatever sources derived shall be applied solely towards promoting the objects of the Association and no portion thereof shall be paid by way of dividend profit, bonus to any member, office bearers of the Association, or otherwise. Violation of this condition shall be the personal responsibility of the office bearers of the member concerned.

إِنَّا كُلَّ شَيْءٍ خَلَقْنَاهُ بِقَدَرٍ ۝



**Pakistan Academy
of
Engineering**

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**FELLOWS OF
THE PAKISTAN ACADEMY OF ENGINEERING**

Sr.	Name	Fathers Name	Address	Telephone	Cell	E-mail
1	Dr.-Ing. Jameel Ahmad Khan	Abdul Hameed Khan	E-6/1, Block 7, Gulshan-e-Iqbal, Karachi 75300	34991581	0345-2590349	profjaghan@yahoo.com
2	Dr. Nasim A. Khan	Abdus Sattar Khan Deshmukh	S.U. House No. 564, Askari V, Malir Cantt., Karachi.	34163618	0300-8564625	drnasimkhan@gmail.com
3	Dr. Afzal Haque	Fazal Haque Qureshi	110/11, Saba Avenue, Phase VI, DHA, Karachi.	35844200	0334-5099131	afzal_haque@hotmail.com
4	Dr. Khan Gul Jadoon	Malik Lal Khan	Director, CIIT, Abbotabad	92(0992)383590	0333-9109693	kgjadoon@ciit.net.pk
5	Dr. Haroon Jangda	Abdus Sattar Jangda	Shaheen Castle Apartment # 202, Plot No. 141, Sharfabad Road No.10, Behar Muslim Coop. Housing Society, Karachi.	34927775	0300-3565850	aamirjangda786@yahoo.com
6	Dr. Shahid Alam	Muhammad Shafiq Alam	92/IV, Roomi Str. Phase VIII, DHA, Karachi.	34303165	0300-2017110	dsa@exponent.com.pk
7	Dr. Salimuddin Zahir	Zahiruddin	House No. 457, Str. 64, Sector-0-9, Pakistan Town, Phase-I, Islamabad-44000	5957525	0323-8556044	zahirsalimuddin@gmail.com cfdpak@apollo.net.pk akarimpk@yahoo.com
8	Dr. Abid Karim	Karim Buksh	Fl-11/1/7, Block-6, Gulshan-e-Iqbal, Karachi.	34968483	0333-3244340	akarim@uit.edu
9	Dr. Ajmal I. Ansari		346 Torrington Dive West Canton, MI 48188, USA	1-734-981-2324	1-734-516-3765	ajmal@lycos.com
10	Prof. Dr. Ashraf Ali Meo	Khalil Ur Rehman	Topi (23640), District Swabi Khyber Pakhtunkhwa, Pakistan	938281026	0334-3551979	drashraf@giki.edu.pk
11	Dr. Noorullah Soomro		Flat No. 3, Lady Sughra Hidayat Mahal, Near Rimpa Plaza, M.A. Jinnah Road, Karachi.	32724415	0333-2150840	nssoomro@hotmail.com
12	Prof. Engr. Dr. Syed Muhammad Usman Ali	Syed Irfan Ali	Electronic Engineering, NED UET., Karachi.	9926126199	0336-1815723	uashah68@hotmail.com uashah68@gmail.com uashah68@neduet.edu.pk
13	Engr. Dr. Zia Mohy-Ud-Din		Biomedical Engineering Department, Sir Syed University of Engineering & Technology, Karachi.	34988000	0333-3025025	ziaofkun@gmail.com
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15	Dr. Irfan Ahmed		Department of Electronic Engineering, NED University of Engg. & tech. Karachi.	9926126199	0332-3803926	irfans@neduet.edu.pk
16	Dr. Muhammad Imran Aslam		Department of Electronic Engineering, NED University of Engg. & tech. Karachi.	9926126199	0334-1027474	iaslam@neduet.edu.pk
17	Prof. Muhammad Hasan Imam		Civil Engineering Department, Umm Al-Qura University, Makkah, Saudi Arabia	9662527000/1039	96657638302	lmam.uqu@gmail.com
18	Prof. Dr. Syed Ali Rizwan		Professor & Head of Structural Engineering Department, NUST	5190854600	0334-4255188	syedalirizwan@hotmail.com
19	Dr. Arshad Aziz		2 nd Floor, Haq Manzil # 1, A-60/8, Lane # 2, Delhi Colony # 1, off Ch. Khaliq-uz-Zaman Road, Clifton, Karachi-75600	2135869248	0333-2228300	arshad@nust.edu.pk
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23	Dr. Ahmad Hussain		Professor, Mechanical Engineering, NEDUET, Karachi	99261261-8	3232723411	ahmad@neduet.edu.pk
24	Dr. Muhammad Fahad		Assistant Professor, Industrial & Manufacturing Engineering Department, NEDUET	99261261-8 2375	0331-2609826	mfahad@neduet.edu.pk
25	Prof. Dr. Abdul Rehman Memon		Rector, Newports Institute of Communication and Economics		0321-2977650	armemon2001@yahoo.com
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28	Prof. Dr. Syed Jawid Askari		Chairman R&D Committee, Department of Mechanical Engineering, Islamic University of Medina, Prince Naif Ibn Abdulaziz, Al Jamiah, Medina 42351, Saudi Arabia		966562487121	drjawidaskari@gmail.com
29	Prof. Dr. Hafeez ur Rahman Memon		Meritorious Professor / Dean Faculty of Engineering, Mehran University of Engineering & Technology, Jamshoro	22 2771312	780 709-6487 0333-2616547	hafeez.memon@faculty.muett.edu.pk
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31	Dr. Abdul Samad Khan	Bashir Ahmed Khan(late)	H # B-82, Block # 10, Gulshan-e-Iqbal, Karachi. - 75300, Pakistan.	021-34968200, 021-34820998	0345-2745509	dr_askhan@yahoo.com
32	Dr. Mohammad Usama Siddiqui		P.O. Box # 8119, King Fahd University of Petroleum & Minerals, Dhahran, Saudi Arabia.		(966) 597882246	musiddiqui@gmail.com
33	Dr. Bilal A. Siddiqui		Machines Lab, GF-053, DHA Suffa University, Khayaban-e-Tufail, DHA Phase-VII, Karachi - 75500, Pakistan.		+92-335-3461598	airbilal@dsu.edu.pk
34	Dr. Muhammad Nauman Qureshi		H # E-133/2, 1st Floor, Block-7, Gulashn-e-Iqbal, 75300, Karachi, Pakistan.		+92-335-2411894-5	mnaumanqureshi@gmail.com

Curriculum Vitae



PROF. DR.-ING. JAMEEL AHMAD KHAN

Date of Birth	February 01, 1938
Place of Birth	Aligarh, UP, British India
Nationality	Pakistani
Father's Name	Abdul Hameed Khan
Address	E-6/1, Block-7, Gulshan-e-Iqbal, Karachi, Pakistan
Telephone	092-021-34991581
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Cell	0345-2590349
E-Mail	profjakhan@yahoo.com

ACADEMIC QUALIFICATIONS

- 1 Secondary School Leaving Examination from Board of Secondary Education, Karachi, FIRST CLASS FIRST POSITION(March, 1951)
- 2 Intermediate Science from University of Karachi with FIRST CLASS (April, 1953)
- 3 Bachelor of Engineering (Mech. & Elect.) from University of Karachi with FIRST CLASS (January, 1957)
- 4 Doctorate in Mechanical Engineering from the Technical University of Aachen, West Germany, with distinction "SEHR GUT", Major Field Fluid Mechanics, (June, 1960)
- 5 Special courses in Industrial Organisation and Management, Nuclear Power, ICE Design, Vibrations, Electronics and Optical Measuring Techniques in the Technical University, Aachen, West Germany (1958-1960)

EXTRA CURRICULAR

- 1 Editor, Young Engineer, NED Government Engineering College Magazine (1954)
- 2 Best Urdu Debator, NED Government Engineering College (1955)
- 3 Member, NED Government Engineering College Hockey Eleven (1956)

PROFESSIONAL QUALIFICATIONS

- 1 Fellow, International Association of Hydrogen Energy (IAHE)
- 2 Member, Association of German Engineers (VDI)
- 3 Member, International Solar Energy Society (ISES)
- 4 Member, Society for International development (SID)
- 5 Member, Pakistan Engineering Council (PEC)

PROFESSIONAL AFFILIATIONS

- 1 Chairman, Japan Pakistan Environmental Research Group (JAPAN-ERG) – (1996-2000)
- 2 Chairman, Pakistan Desalination Association (Pak DA, affiliated with IDA) – (1997-2000)
- 3 Chairman, Pakistan Engineering Council (Statutory Apex body of the Engineering Profession), elected on all Pakistan basis by the engineering community:
 - First Term (1997-1999)
 - Second Term (2000-2002)
- 4 President, Pakistan Chamber of Engineers:
 - First Term (1997-1999)
 - Second Term (2000-2002)
- 5 Member, Executive Committee, Asian Fluid Mechanics Congress (AFMC, comprising 29 Asian Countries)
- 6 Chairman, Institute for Technology Assessment & Transfer (2010-todate)
- 7 **President, Pakistan Academy of Engineering.**

PROFESSIONAL EXPERIENCE

- 1 After graduation joined Karachi Shipyard and Engineering Works Limited (PIDC) as Asstt. Engineer, acquired training in all the production engineering trades, and was responsible for the erection of out-fittings on the Dry Dock (1957).
- 2 Trained in Maschinen Fabrik Augsburg Nurnburg (MAN), West Germany, in the field of manufacture and testing of Heavy Marine Diesel Engines, Gas Turbines and Compressors (concurrently with studies 1958).
- 3 Worked as Research Scholar in the Institute of Aerodynamics, Technical University of Aachen (RWTH), West Germany (about three years 1958-1960).
- 4 Joined Associated Consulting Engineers Limited in October, 1960, and worked till October 1966, as Senior Engineer. Responsibilities extended from leading project teams to negotiations with clients, and from detailed planning and design work to coordination and supervision of operation. Activities covered industrial project planning, pre-investment studies, preparation of engineering specifications and tender documents, technical supervision, operational analysis, management advice and mechanical engineering design.

Some of the important assignments included:

Scheme for Reorganisation and Expansion of Pakistan Flotilla Company Limited, East Pakistan, Planning of Repair Facilities at Barisal for the East Pakistan Inland Water Transport Authority, Common Service and Facilities Centers for the Small Industries Corporation at Karachi. General Consultant for appraisal of Industrial Schemes on behalf of the Industrial Development Bank of Pakistan. Operational analysis and planning for Reorganization, Modernization

and Expansion of the Fauji Foundation Industries. Research Studies on Industrial Projects for the Planning Commission of Pakistan for the Second Five Year Plan. Feasibility studies for the Investment Promotion Bureau of Pakistan. Evaluation of Industrial Projects for the Planning Commission of Ghana. Feasibility studies and appraisal reports on a number of industrial projects for private clients. Planning of Industrial Estates at Jeddah, Riyadh and Dammam for the Ministry of Commerce and Industry, Saudi Arabia, and a number of feasibility studies on industrial projects for the Government of Saudi Arabia. Complete design of the Automatically Controlled Heating System for New Engine Overhaul Workshop for Pakistan International Airlines Corporation at Karachi.

Concurrently worked as visiting faculty, at the NED Government Engineering College (Since 1962). Lectured for two years (1961 - 62) on Production Methods at the Pakistan Institute of Industrial Accountants, Karachi. Conducted a training course in 1963 on the Modern Techniques of Project Appraisal for the officers of the Industrial Development Bank of Pakistan. Also lectured at the National Institute of Public Administration, Karachi.

- 5 Joined Consultants Alliance Limited as Director in October, 1966, and worked upto March, 1968. Responsibilities included management of the Industrial Wing engaged in Industrial Planning, Preparation of Feasibility Studies and Mechanical Engineering Design.
- 6 Joined NED Government Engineering College in March, 1968 as Professor of Mechanical Engineering and Head of the Mechanical Engineering Department. Also worked as Director Research Team, High Level Engineering Manpower Study sponsored by the National Manpower Council, Government of Pakistan.
- 7 Worked as Chairman, Department of Mechanical Engineering since the creation of NED University of Engineering and Technology, Karachi in March 1977, responsible for the physical planning of undergraduate and post graduate laboratories and other teaching facilities for the department catering for a student population of about 1500. Developed a fairly close linkage of the department with the local industry and other research organisations. Initiated and established several new programmes, particularly in the field of Renewable Energy Sources, Energy Conservation, Water Desalination, Robotics and Pollution Control. The Department is actively engaged in the Research and Development activities pertaining to Solar Energy Systems, Sea Wave Activated Power Systems, Wind Energy Systems and Water Desalination.

Worked for the University management as:

Member, Syndicate, NED University of Engineering and Technology (1977 - 1984)

Member, Senate, NED University of Engineering and Technology (1977 - 2010)

- Member, National Academic Council, University Grants Commission (1977 - 1987)
- 8 Appointed as **Vice Chancellor of the NED University of Engineering and Technology** with effect from March 01, 1987 and worked till November 19, 1991.
- As Chief Executive of the University, was responsible for the Academic, Administrative and Financial Management of the entire system. The University catered for a student population of around 6000 and offered undergraduate programmes in 16 and post-graduate programmes in 7 disciplines of engineering and technology, which were internationally recognized. Three premier institutions of the Armed Forces were affiliated with university viz:
- Military College of Engineering, Pakistan Air Force College of Aeronautical Engineering and Pakistan Naval College of Engineering (PNS Jauhar). In addition two public sector institutions viz:
- Dawood College of Engineering & Technology and Government College of Technology were also affiliated with the University.
- Developed systems and procedures and the code of the University, initiated introduction of MIS, prepared university development plans under the Pakistan Seventh Five Year Plan and Eighth Five Year Plan and got them approved.
- Established University - Industry Council in collaboration with the Chamber of Commerce & Industry, Karachi.
- Developed extensive computerization facilities in the University and a sizeable Research Fund of its own.
- Initiated programmes aimed at linkages with a number of foreign universities
- Worked as Chairman of several Vice - Chancellors Committees on all Pakistan basis such as one constituted for preparing a Model Act for all the Public sector Universities in Pakistan.
- 9 Worked as Professor of Mechanical Engendering in BPS-22 (Maximum Grade in the Civil Services of Pakistan) Nov, 1991- Feb. 1998) and as the Senior most Professor in the University, looking after research degree programmes in the field of Energy Conservation, Solar Energy, Water Desalination, Flow Induced Vibrations, Computational Fluid Dynamics, Heat Pipes, Metal Hydride, Heat Pumps and Modal Analysis.
- 10 Appointed as **Professor Emeritus** of the NEDUET (1999-2010)

CORPORATE MANAGEMENT

- 1 Appointed Director by the Ministry of Production, Government of Pakistan, on the Board of Directors of Metropolitan Steel Corporation Karachi (1986 - 1992).
- 2 Appointed Member of the Board of Trustees of the Pakistan Science Foundation by the Ministry of Science and Technology, Government of Pakistan (1988 - 1991).
- 3 Appointed Director by the Ministry of Water and Power, Government of Pakistan, on the Board of Directors of National Engineering Services of Pakistan (Pvt.) Ltd. (NESPAK) – (1998-2010).

ADVISORY ATTACHMENTS

- 1 Honorary Advisor to the Standing Committee of Industry, Federation of Pakistan, Chamber of Commerce and Industry (1988-1989)
- 2 Member, Export Promotion Committee, on Engineering Goods, Export Promotion Bureau, Government of Pakistan. (1968 - 74)
- 3 Advisor to the Department of Insurance, Government of Pakistan (1968-76)
- 4 Advisor to the Education Section, Planning Commission, Government of Pakistan (1972-73)
- 5 Member, Committee for the Establishment of Pakistan Bureau of Engineering Design, Ministry of Science and Technology, Government of Pakistan (1973-74)
- 6 Member, Committee for the Establishment of National Engineering Laboratory, Ministry of Science and Technology, Government of Pakistan (1973-1974)
- 7 Member, Advisory Committee, National Development Volunteer programme (1973-1976)
- 8 Member, Panel for Transfer of Technology, Ministry of Science and Technology, Government of Pakistan (1974)
- 9 Member, Advisory Committee, Hydro - Carbon Institute, Ministry of Fuel, Power and Natural Resources, Government of Pakistan (1977-1978)
- 10 Member, Panel of Experts, National Institute of Oceanography (1982-83)
- 11 Member, National Committee on Clean Energy, Ministry of Science and Technology, Government of Pakistan (1983)
- 12 Member, Panel of Experts, Kalabagh Dam Consultants(1983-1984)
- 13 Member, Advisory Committee on Power and Engineering, Pakistan Atomic Energy Commission (1987-1998)
- 14 Advisor, Centre for Environmental Health Activities (CEHA), Eastern Mediterranean Regional Organisation, WHO, Amman, Jordan (1987-1995)
- 15 Member, Screening Committee, Asian Productivity Organisation (APO), Tokyo, Japan (1987-1994)
- 16 Member, General Council of the Society for the Promotion of Engineering and Technology in Pakistan (SOPREST), Parent Body of the Ghulam Ishaq Khan Institute of Engineering Sciences & Technology (1992-2002)
- 17 Member, Board of Governors, National University of Science & technology, Rawalpindi (1996-2002)

- 18 Member, Board of Governors, Pakistan Institute of Engineering & Applied Sciences, Pakistan Atomic Energy Commission, Nilore, Islamabad (2000)
- 19 Member, National Commission for Science & Technology, Government of Pakistan (1996-2002)
- 20 Member, Advisory Board, Ministry of Housing & Works, Government of Pakistan (2002)

PUBLICATIONS, PAPERS, REPORTS AND STUDIES

- 1 Unsteady Flow through Ducts of Injection Systems (Published by the West German Government (1962)
- 2 Modern Techniques of Project Appraisal, IDBP (1963)
- 3 Industrial Estates in Saudi Arabia, Ministry of Commerce and Industries, kingdom of Saudi Arabia (1966)
- 4 Noise Control at the Airport, PAEME Seminar (1967)
- 5 Orientation of Policy towards Technology in Pakistan (1967)
- 6 A number of feasibility studies on Industrial Projects in the Private and Public Sector in Pakistan and Foreign Countries.
- 7 Study on High Level Engineering Manpower in Pakistan, National Manpower Council, Government of Pakistan, sponsored by the US AID (1970)
- 8 Spare Parts Problems in Pakistan, UNIDO Seminar (1972)
- 9 Study on the Progressive Manufacture of NISSHAN JEEP ENGINE for Pakistan Automobile Corporation (1974)
- 10 Feasibility Study on the Manufacture of Commercial / Military Vehicles in Pakistan, for Pakistan Automobile Corporation (1975)
- 11 Study on the Capacity Utilization in Large Engineering Industries in Pakistan, Planning Commission, Government of Pakistan, (1987)
- 12 Study on the Restructuring of Heavy Engineering Complex and Heavy Forge and Foundry, State Engineering Corporation of Pakistan, sponsored by the World Bank, (1986)
- 13 Contributed Articles on Public Policy in respect of Energy, Planning, and Cyber Security published in Dawn and Business Recorder.

CURRENT SUBJECT INTERESTS

- 1 Technology Assessment and Transfer
- 2 Hydrogen Energy Economics
- 3 Exergoeconomics

TRAVELS

USA, Germany, UK, France, Switzerland, Italy, Greece, Sweden, Turkey, Jordan, Egypt, Lebanon, Saudi Arabia, Dubai, Abu Dhabi, Iran, India, Bangladesh, South Korea, Malaysia, Singapore, Thailand, Philippines, China, Japan and Vietnam.