



BRIEF ON PAKISTAN ENGINEERING COUNCIL

SEPTEMBER 24, 2018



INTRODUCTION

Pakistan Engineering Council (PEC) - Established under PEC Act of 1976 (Amended upto 1st December, 2016).

An apex body to regulate Engineering Profession in totality including Engineering Education.



INTRODUCTION

Vision:

The Council regulates the engineering profession with the vision that the engineering profession shall function as a key driving force for achieving rapid and sustainable growth in all national, economic and social fields;

Mission:

The Council shall as its mission set and maintain realistic and internationally relevant standards of professional competence and ethics for engineers, and license engineers, and engineering institutions to competently and professionally promote and uphold the standards;



INTRODUCTION

- Chairman is the Chief Executive of the Council
- Registrar is the Custodian of the Council
- Governing Body is the Principal Executive Authority of the Council
- Composition of Governing Body:
 - a. *Sixty six (66) Professional Engineers*
 - b. *Minimum twenty (20) years of professional standing.*



GOVERNING BODY – ELECTED MEMBERS

Designation	No. of Positions	Description
Chairman	01	Elected by All Engineers of Pakistan
Sr. Vice Chairman	01	Elected by All Engineers of Pakistan
Vice-Chairmen	04	Elected from respective Province
Elected Members	40	Elected by respective discipline of Engineers
Total	46	

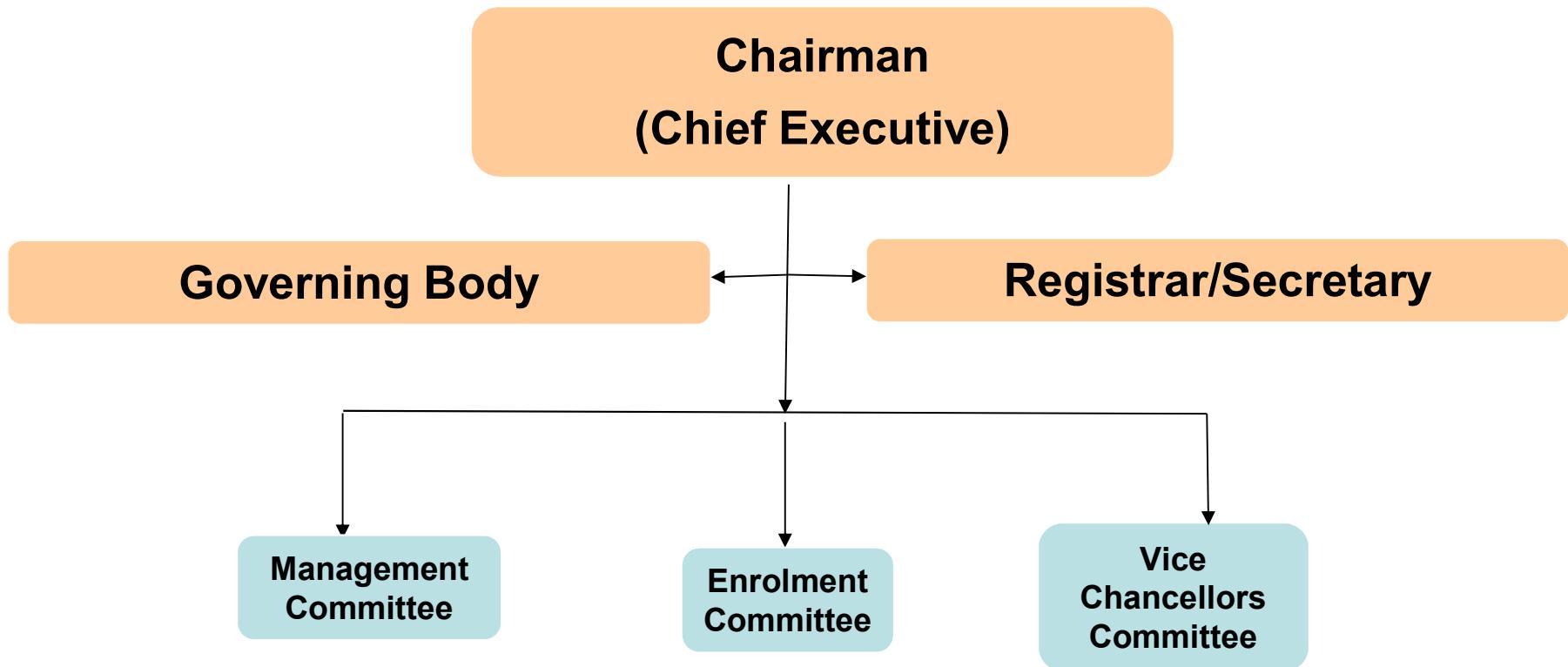


GOVERNING BODY – NOMINATED MEMBERS

Designation	No. of Positions	Description
Nominated Members (19)		
	03	01 Member – Planning Commission 01 Member – Ministry of Science & Technology 01 Member – Higher Education Commission
	02	01 Member - AJK 01 Member - Gilgit Baltistan (Nominated by the Federal Government)
	04	01 Member from each Province
	05	05 Vice Chancellors of Engineering Universities <ul style="list-style-type: none">• 01 nominated by each Provincial Government• 01 nominated by Federal Government
	01	Engineer-in-Chief, Pakistan Army
	01	President/Chairman of Association of Consulting Engineers Pakistan (ACEP)
	01	President/Chairman of Constructors' Association of Pakistan (CAP) or their nominee
	01	Elected President of the Institution of Engineers Pakistan
	01	Elected President of Pakistan Engineering Congress
Registrar, PEC	01	Ex-officio
Total	20	



GOVERNING BODY

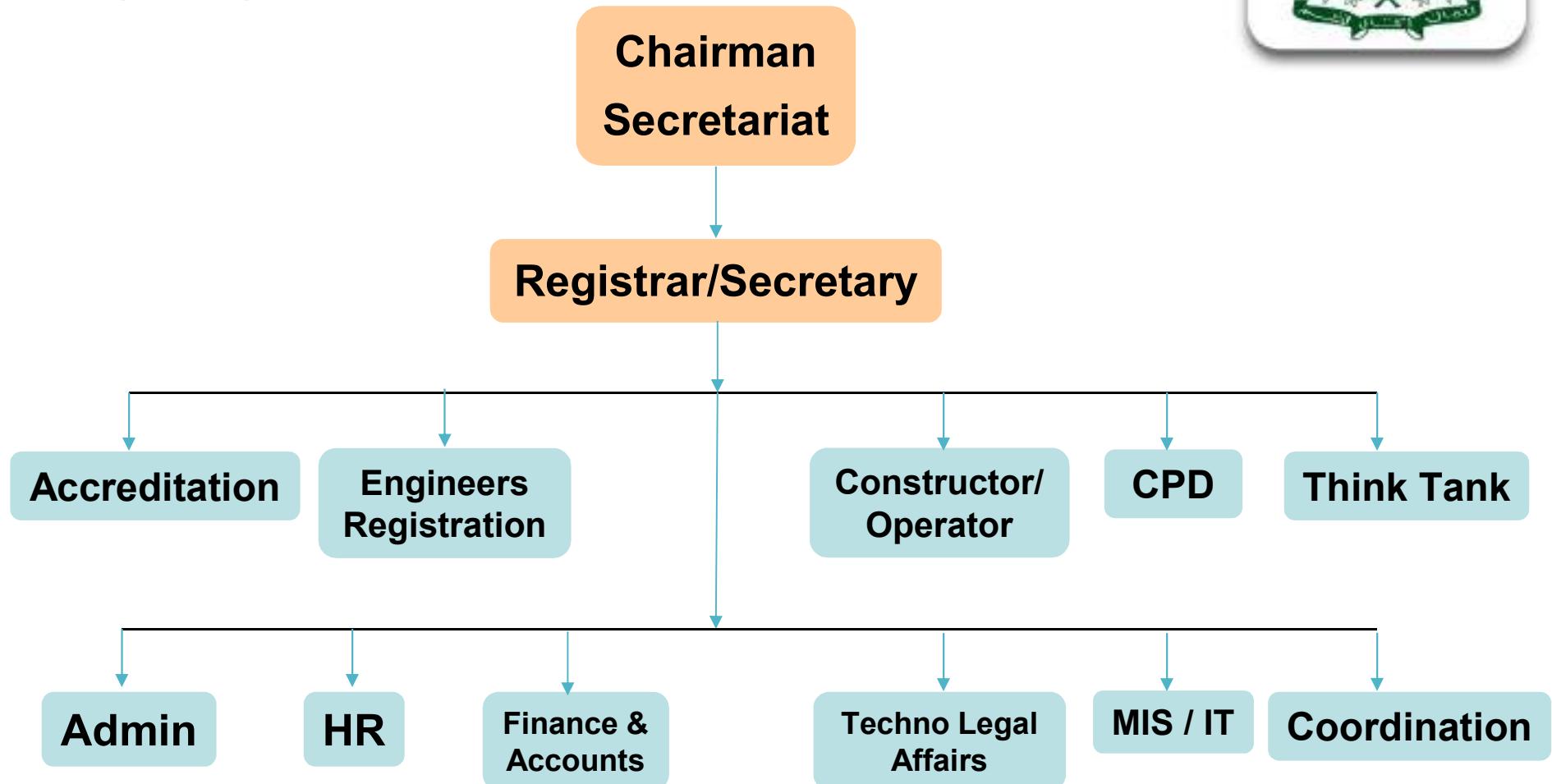




PEC
SECRETARIAT

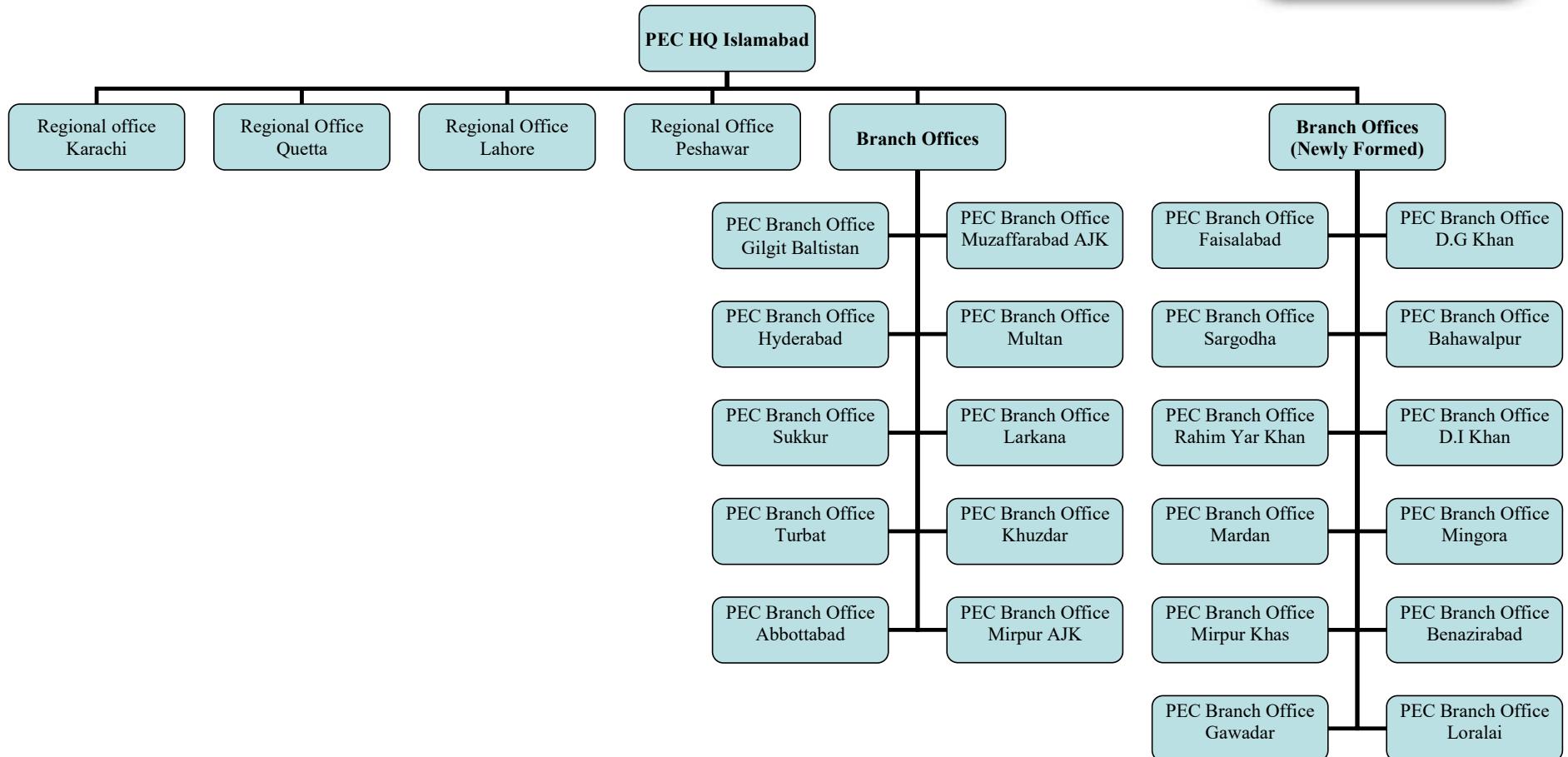


Organogram of PEC HQ





PEC SECRETARIAT





MAJOR FUNCTIONS/ OBJECTIVES

- Accreditation of Engineering Programs
- Registration of Engineers
- Continuing Professional Development (CPD) of Engineers
- Registration of Construction & Consulting Firms
- Assistance to the Federal Government as Think Tank
- Safeguard and Promotion of Engineering Profession in Totality



REFORMS IN ACADEMIA



Accreditation

- Universities/HEIs 125
- Accredited Engineering Disciplines 29
- Total Accredited Engineering Programs 330
 - Programs Under Level-I 288
 - Programs under Level-II (OBA*) 42
- Under Process Engineering Programs 115



*Substantially Equivalent to Washington Accord (WA)
Signatories



Accreditation Reforms

- Regional Consultative Working Group Meetings
- Imposition of Penalties to Regulate the Byelaws, Regulations and Policies of PEC
 - a. Penalty of Rs.500,000/- per student per program
 - b. Withdrawal/De-accreditation of Programs in case of Violation
 - Introduction of Surprise visits by Task Force for implementation of Reforms policies for quality education
- Decentralization of the Accreditation Committee to provincial level
- Enrollment of Students with PEC
- Policy Reforms to launch new engineering program through Zero Visit
- Up-gradation of EA&QEC to EAB (Engineering Accreditation Board)



REFORMS IN ACADEMIA



PURPOSE BUILT CAMPUS
Made mandatory for opening of new
Engineering University

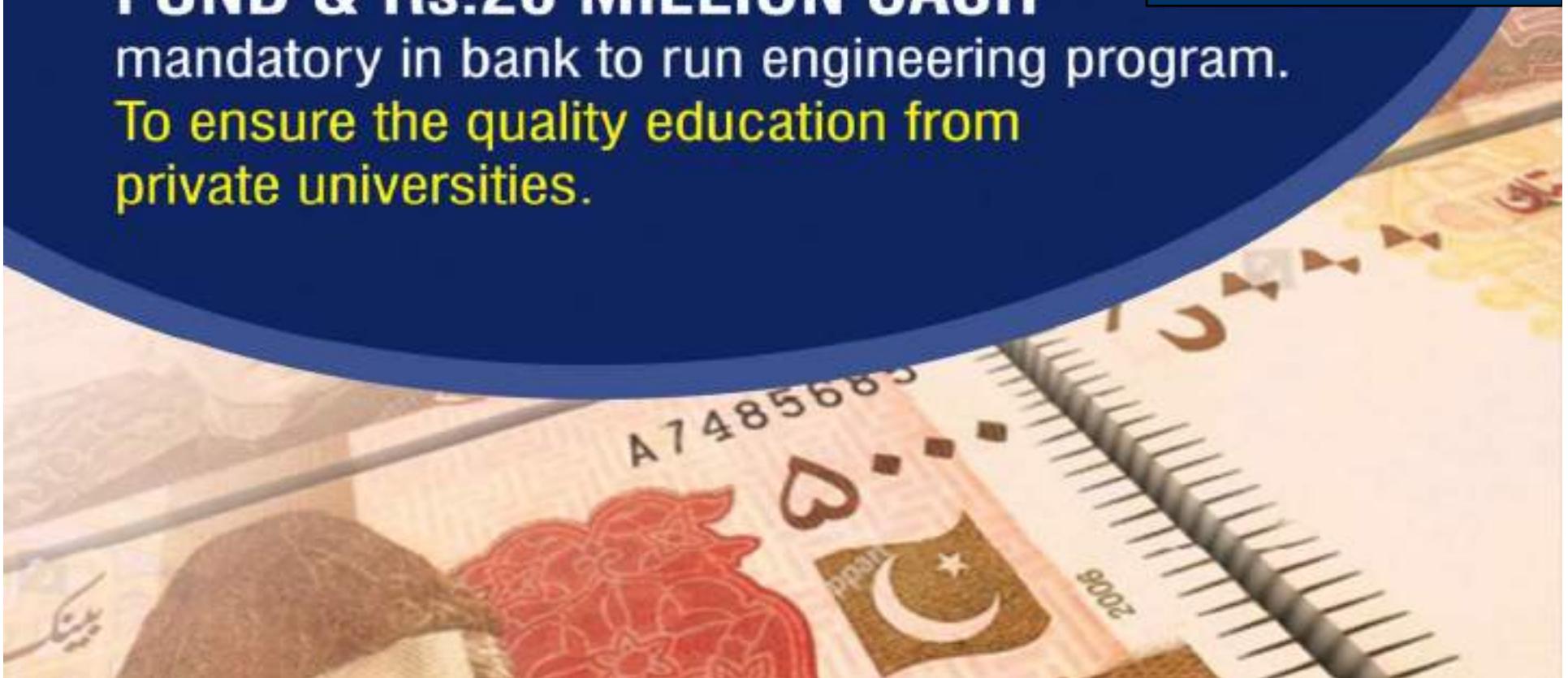


REFORMS IN ACADEMIA

Rs.25 MILLION ENDOWMENT FUND & Rs.20 MILLION CASH

mandatory in bank to run engineering program.

To ensure the quality education from
private universities.





REFORMS IN ACADEMIA



**STOPPED
OPENING OF NEW UNIVERSITIES
IN RENTAL OR LEASE BUILDINGS
TO CONTROL THE QUALITY
OF ENGINEERING EDUCATION**



REFORMS IN ACADEMIA



TO IMPROVE THE QUALITY OF ENGINEERING EDUCATION

**Curb the over intake of students;
Imposed Penalty of
Rs.500,000/Semester/Student**



REFORMS IN ACADEMIA



INTRODUCED
AWARDS OF TEN MILLIONS
TO ENCOURAGE
R&D AMONGST UNDERGRADE
ENGINEERING STUDENTS



REFORMS IN ACADEMIA

CONSULTATIVE MEETINGS WITH 126 ENGINEERING UNIVERSITIES

For development of curriculum and to ensure
quality in Engineering Education



Consultative Workshop at UET Lahore



REFORMS FOR ENGINEERS



REGISTRATION DEPARTMENT

Registered Engineer (RE)

“Registered Engineer” means a person who holds an accredited engineering qualification, whether working privately or in the employment of an engineering public organization and is registered as such by the Council. Registered Engineer shall perform all professional engineering works except independently signing design.

Professional Engineer (PE)

“Professional Engineer” means a person who holds an accredited engineering qualification and after obtaining a professional experience of five years, whether working privately or in the employment of an engineering public organization, has passed the prescribed engineering practice examination and is registered as such by the Council.

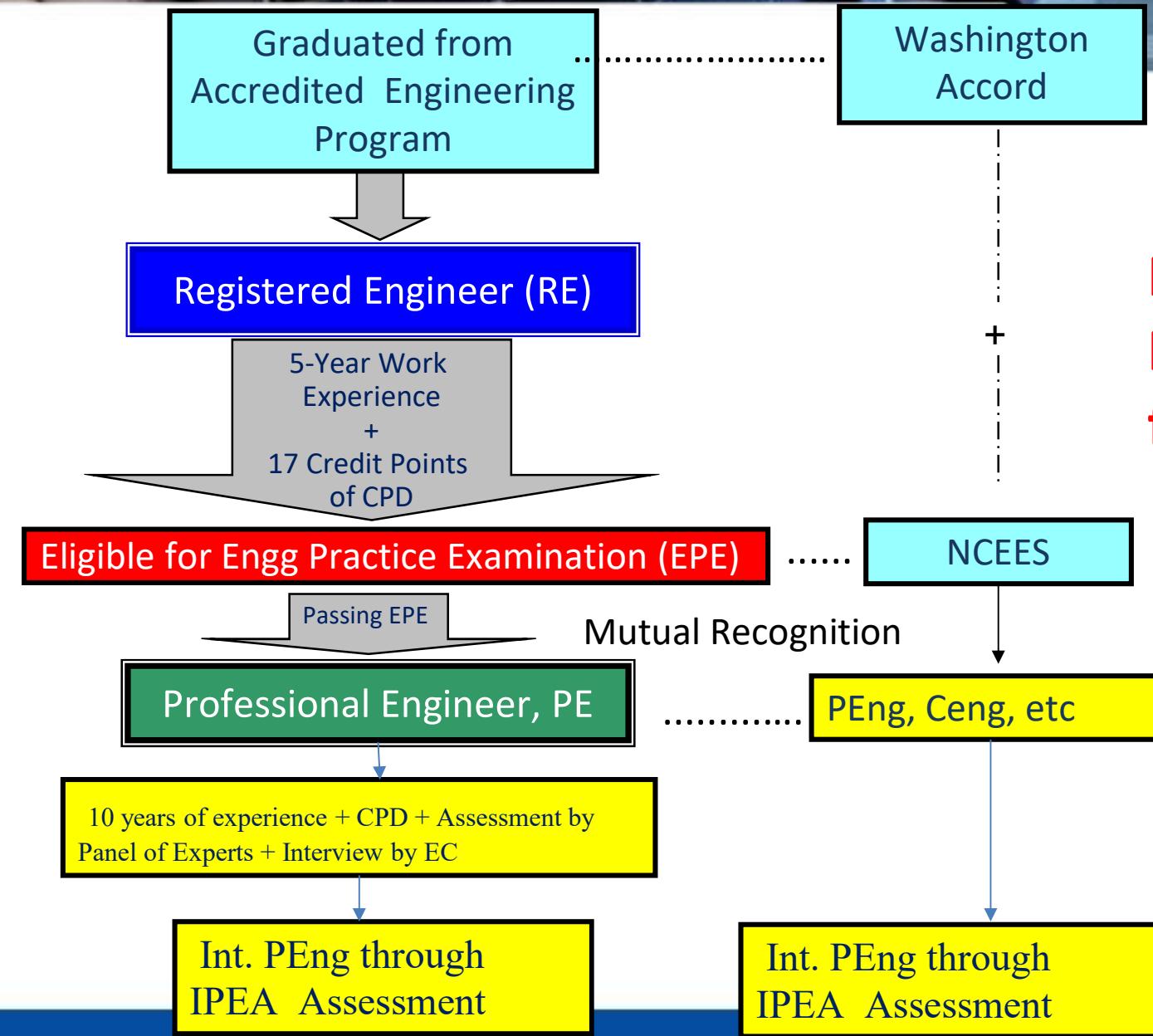


REGISTRATION STATISTICS (AS ON 30TH JUNE, 2018)

Gender	R.E	P.E	Total
Male	150,525	87,675	238,200
Female	14,660	2,763	17,423
Total	165,185	90,438	255,623



PEC Framework for RE & PE





REFORMS FOR ENGINEERS

ONLINE REGISTRATION & RENEWAL FOR ALL ENGINEERS





REFORMS FOR ENGINEERS

**TO ENCOURAGE ENTREPRENEURSHIP
AMONGST ENGINEERS,
PEC INTRODUCED LICENSES FOR ENGINEERS IN 5
CATEGORIES FROM C6/O6 TO C2/O2 ON THE BASIS OF
THEIR EXPERIENCE ONLY**





REFORMS FOR ENGINEERS

20,000 INTERNSHIPS

- a) RS.15,000/- BY GOVERNMENT OF PAKISTAN
- b) PEC PLACING THE ENGINEER WITH EMPLOYER
- c) PEC ARRANGING RS.10,000 FOR INTERNEE FROM EMPLOYER
- d) PEC OPENING JOB PORTAL TO FACILITATE YOUNG ENGINEERS IN JOB SEARCH





REFORMS FOR ENGINEERS

MANDATORY EMPLOYMENT OF 70% PAKISTANI ENGINEERS IN FOREIGN COMPANIES





REFORMS FOR ENGINEERS

Lahore Office: Inaugurated in May 2018





REFORMS FOR ENGINEERS

KPK Office: Will be Inaugurated in October 2018





REFORMS FOR ENGINEERS

DISCOUNTS ON 900+
NATIONAL & INTERNATIONAL BRANDS
UP TO 30% ON PEC REGISTRATION CARD



REFORMS IN CPD

(Continuing Professional Development)



CPD STRATEGY

Two-Pronged Strategy :

1. PEC regularly conducts CPD activities for its growing engineering community.
2. CPD activities through PEC accredited Engineering Universities/ institutions/Organizations as PEBs



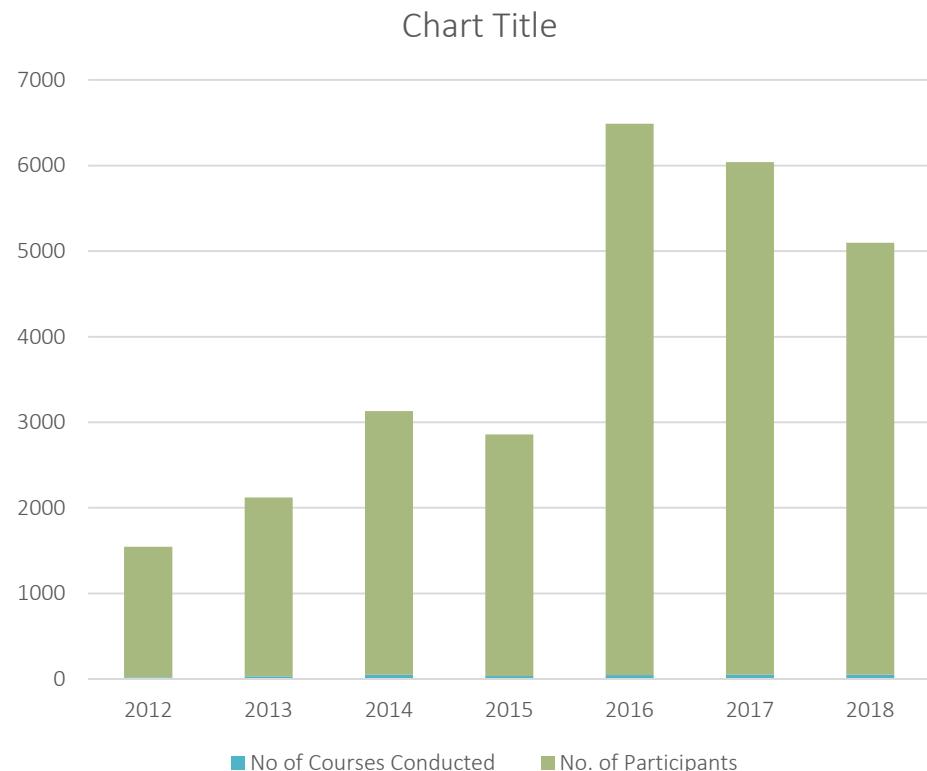
REGISTRATION OF PEBs

Sr.#	Professional Engineering Bodies (PEBs)	Nos.
1	Engineering Universities/Professional Engineering Institutions	114
2	Professional Engineering Departments/ Organizations	15
	Total	129



CPD Courses Conducted by PEC

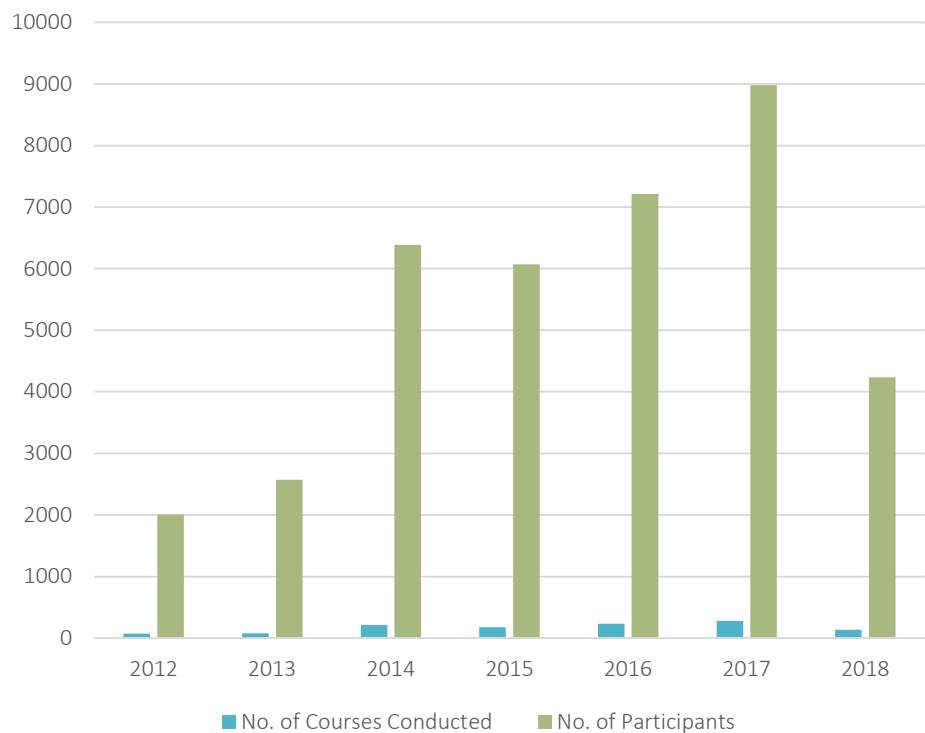
Year	No of Courses Conducted	No. of Participants
2012	19	1527
2013	33	2088
2014	49	3080
2015	35	2823
2016	45	6442
2017	51	5990
2018	49	5050
Total	269	27000





CPD Courses Conducted by PEBs

Year	No. of Courses Conducted	No. of Participants
2012	73	2005
2013	80	2572
2014	211	6388
2015	175	6070
2016	232	7212
2017	283	8982
2018	134	4234
Total	1188	37463





REFORMS IN CPD

Launched

WEBINAR AND VIDEO-LINK BASED CPD COURSES

to enhance the coverage over the entire country.





REFORMS IN CPD



Introducing

MARKET-BASED COURSES ENHANCING MANAGEMENT SKILL OF THE ENGINEERS

(presentation skills, time management, project management, leadership etc.)





REFORMS IN CPD



TRAINED MASTER TRAINERS FOR OUTCOME-BASED EDUCATION (OBE) AND OUTCOME-BASED ASSESSMENT (OBA) SYSTEMS

with the help of international experts





CPD REFORMS

Reforms in Professional Development of Engineers' Framework

Amendments in Pattern and Conduct of Engineering Practice Examination (EPE) for Title of Professional Engineer (PE)

Amendments in PDE Bye-laws have been approved Federal Cabinet and notified on October 31, 2017

- Exam to be conducted in two parts (Part-I and Part-II) instead of three parts, as in practice
- Candidates not qualifying in any one part will be given chance to appear in the same part in the next three consecutive exams, instead of reappearing
- Part-II will include two sections i.e. Section-A (Breadth) & Section-B (Depth), the paper will be discipline-based with choice of specialized area



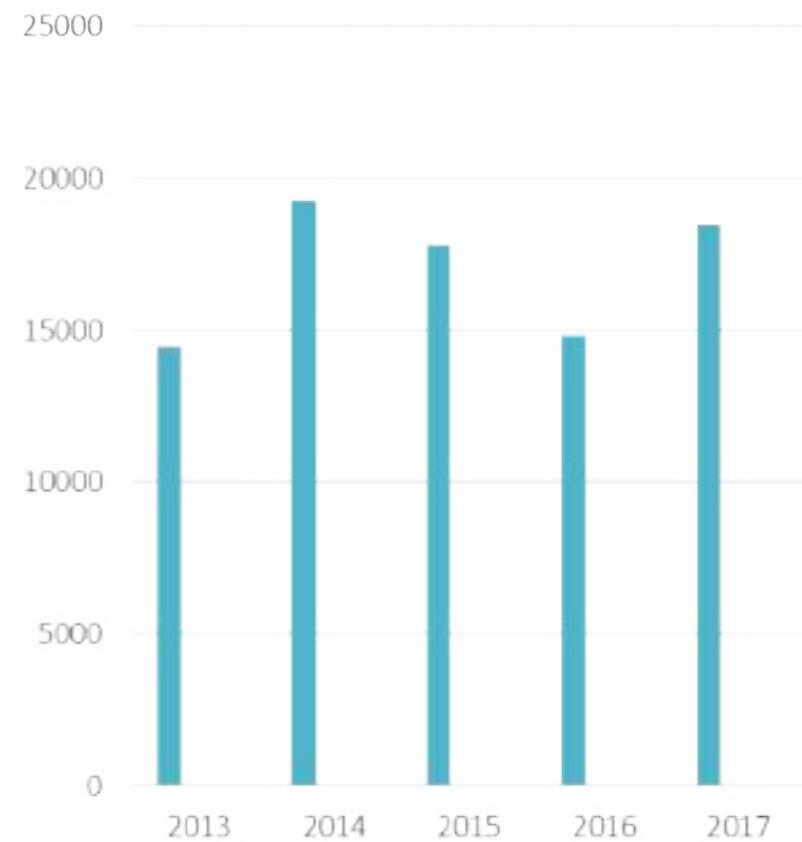
REFORMS IN CONSTRUCTION & CONSULTANT COMPANIES





LICENSES ISSUED DURING LAST 5 YEARS

Year	Issued Licenses
2013	14501
2014	19243
2015	17824
2016	14823
2017	18497





Reforms in Registration of Construction Firms

- Biometric verification of Engineers.
- Online registration of Contractors/operators (to be launched by 15th Feb, 2018)
- Employment opportunities for 6,720 fresh Engineers
- Incentive schemes for constructors/operators
- Introduction of rented plant and machinery
- Establishment of Facilitation Center



Amendments in Construction & Operations Bye-Laws, 1987 for Foreign Firms

- Registration of Foreign Firms on annual basis instead of Project specific license
- JV with Pakistani Firms is mandatory for foreign firms
- Foreign firms cannot be registered/participate in Category below C-1 Tenders
- Minimum 70% Employment of Pakistani Engineers
- Prior to 2016, Foreign firms were registered without any consideration of financial soundness. Since 1st January, 2016, PEC revised its policy, according to which specific financial soundness is one of the prerequisites for issue of license.
- Revised definition of Local & Foreign Firms
- Level playing field for foreign companies to build the financial & technical capacity of local construction industry by introducing new construction practices
- One window operation at facilitation center



**REFORMS IN CONSTRUCTION &
CONSULTANT COMPANIES**

**REVAMPED THE CRITERIA
OF CONSTRUCTOR & CONSULTANT
COMPANY REGISTRATION
TO ENSURE THAT ENGINEERS ARE EMPLOYED
TO PRODUCE QUALITY WORK FOR PAKISTAN**



REFORMS IN CONSTRUCTION & CONSULTANT COMPANIES

**POWER TRANSFER TO REGIONAL OFFICES FOR
NEW, RENEWAL AND UPGRADATION OF LICENSES
FROM C6 TO C2**





REFORMS IN CONSTRUCTION & CONSULTANT COMPANIES

INCREASED PROFESSIONAL CREDIT POINTS LIMIT FOR COMPANY'S REGISTRATION TO ENSURE QUALITY OF WORKS





**REFORMS IN CONSTRUCTION &
CONSULTANT COMPANIES**



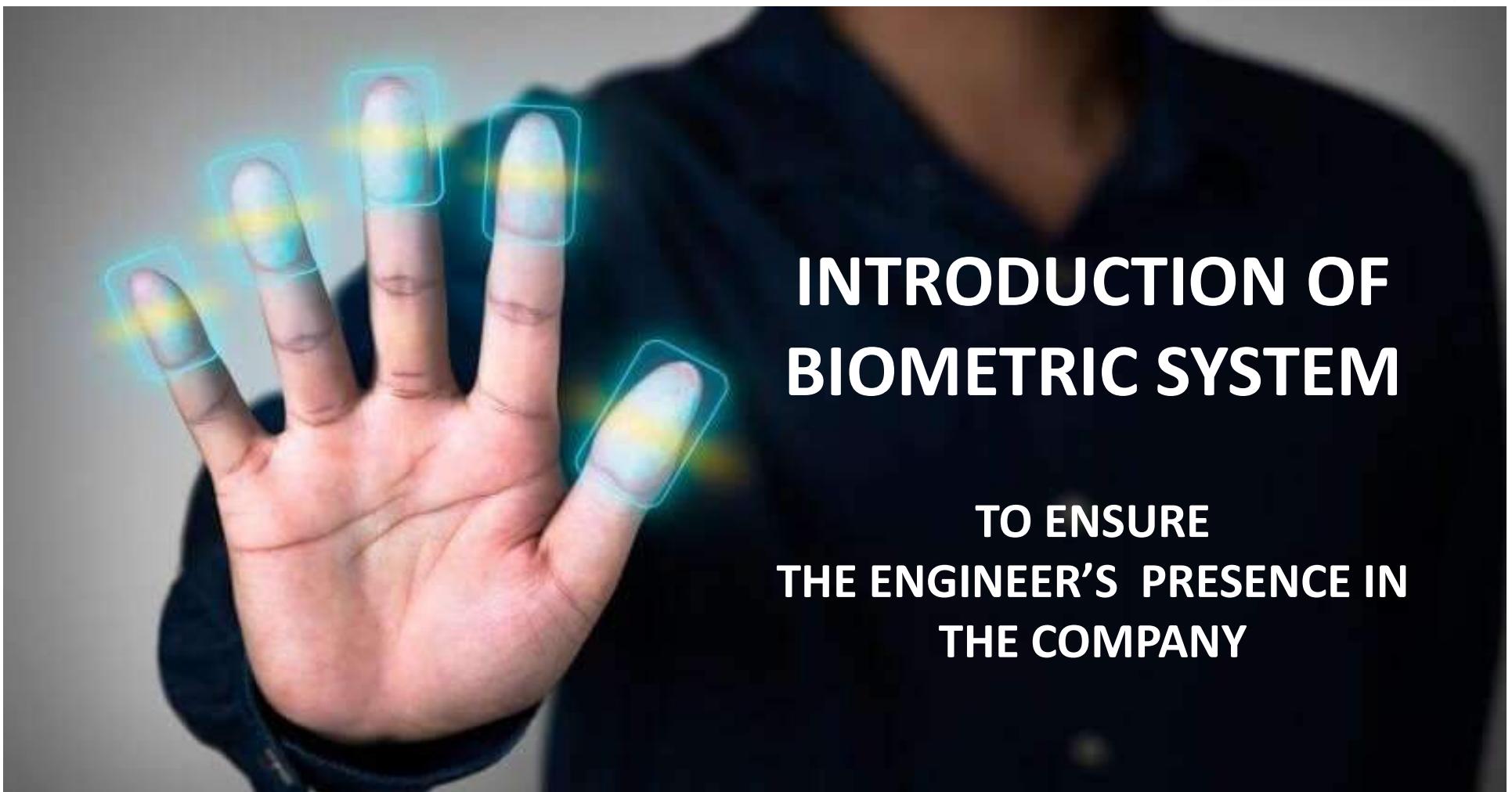
**INTRODUCTION OF
ONLINE REGISTRATION &
RENEWAL SYSTEM FOR
CONSTRUCTION &
CONSULTANT COMPANIES
TO
ELIMINATE
MALPRACTICE**



**REFORMS IN CONSTRUCTION &
CONSULTANT COMPANIES**

INTRODUCTION OF BIOMETRIC SYSTEM

**TO ENSURE
THE ENGINEER'S PRESENCE IN
THE COMPANY**





**REFORMS IN CONSTRUCTION &
CONSULTANT COMPANIES**

**SIGNED MoU WITH
CAPEC
(CHINA ASSOCIATION OF PLANT ENGINEERING CONSULTANTS)**

**TO STRENGTHEN COOPERATION IN THE FIELD OF
ENGINEERING FOR PAKISTANI CONSTRUCTORS &
CONSULTANT COMPANIES**



**REFORMS IN CONSTRUCTION &
CONSULTANT COMPANIES**

MADE MANDATORY FOR FOREIGN COMPANY
Compulsory Joint Venture
with equivalent Pakistani company
before bidding the project





**REFORMS IN CONSTRUCTION &
CONSULTANT COMPANIES**

**STOPPED FOREIGN
COMPANIES REGISTRATIONS
IN 5 CATEGORIES
FROM C-6/O-6 TO C-2/O-2
GIVING BOOST TO
PAKISTANI COMPANIES**





REFORMS IN CONSTRUCTION & CONSULTANT COMPANIES

INTRODUCED SUPERVISORY LICENSES

TO TRAIN YOUNG ENGINEERS WITH CONSTRUCTION & CONSULTANT COMPANIES TO PARTICIPATE IN DEVELOPMENT OF NATIONAL ECONOMY.

12,000 ENGINEERS WERE PROVIDED EMPLOYMENT





THINK TANK



THINK TANK

- Acting as a Think Tank of Government of Pakistan
 - Water policy
 - National Energy policy
 - Construction & Infrastructure
 - Education
 - Smart Grids



THINK TANK

Think Tank Activities

- Building code of Pakistan
 - Seismic Provisions
 - Energy Provisions
 - Pakistan Electric & Telecom Safety Code
 - Fire Safety Provisions
- Revision of Standard Bidding & Contract Documents



INAUGURATION CEREMONY BUILDING CODE





FACILITATION FOR ENGINEERS, UNIVERSITIES & COMPANIES





NATIONAL AND INTERNATIONAL ACHIEVEMENTS



INTERNATIONAL ACHIEVEMENT

**GLOBALLY RECOGNIZED PROFESSIONAL
QUALIFICATION IN ENGINEERING**



**INTERNATIONAL RECOGNITION OF
ENGINEERING EDUCATION
OF PAKISTAN
BY WASHINGTON ACCORD
IN JUNE-2017**



INTERNATIONAL ACHIEVEMENT



**Pakistan Engineering Council
Authorized to Grant License for,
INTERNATIONAL
PROFESSIONAL
ENGINEER
IN JUNE-2018**

International Professional Engineers Agreement (IPEA)



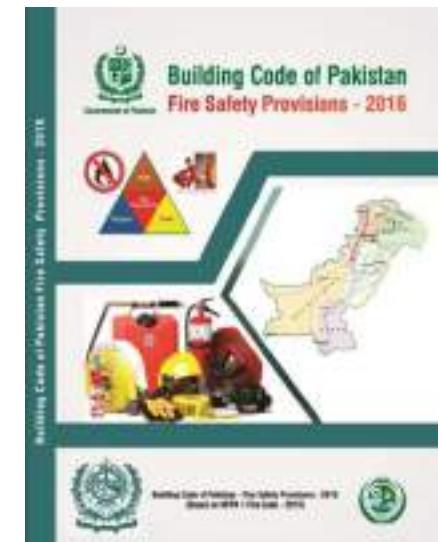
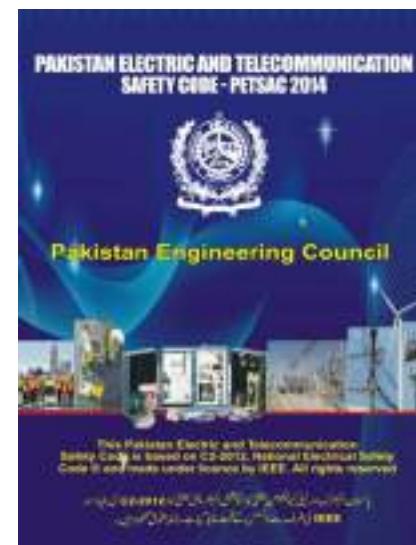
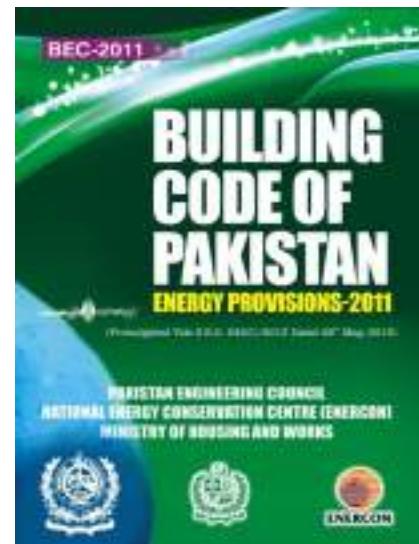
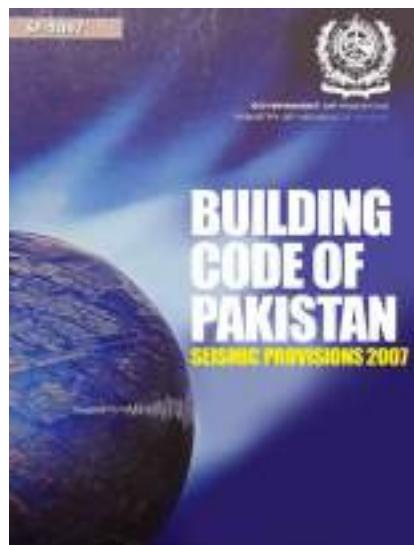
INTERNATIONAL ACHIEVEMENT

Accreditation Recognition by
**FEDERATION OF ENGINEERING
INSTITUTIONS OF ASIA AND THE PACIFIC
(FEIAP)**
Pakistan accepted as Full Member



NATIONAL ACHIEVEMENT

DEVELOPMENT OF BUILDING CODES OF PAKISTAN





FUTURE PLANS



FUTURE PLANS

QUALITY ASSURANCE IN ENGINEERING EDUCATION





FUTURE PLANS

REVISION OF CURRICULUM TO MEET THE INDUSTRIAL NEEDS OF 21st CENTURY





FUTURE PLANS

ESTABLISHMENT OF NATIONAL ENGINEERING ACADEMY (TRAININGS/CAPACITY BUILDING)

- For organizing trainings and specialized courses (management & technical) for the professional growth and skill enhancement of the engineers
- Facilitating engineers' activities and welfare programs
- Providing platform for technology parks and incubation centres for various sectors and linking industry-academia





FUTURE PLANS

CREATION OF

TECHNOLOGY CONSTRUCTION BANK

BY ENGINEERS FOUNDATION





FUTURE PLANS

ESTABLISHMENT OF SCIENCE & TECHNOLOGY PARK AND INCUBATION CENTRE

to promote Entrepreneurship, Advancement &
Export of Technology by Engineers

resources
incubation online
entrepreneur university financial
office program
management
strategy successful
start internet
web entrepreneurship
startup
technology development
research service company concept
business incubator
businessman plan entrepreneurial
strategic success support organization
process growth digital



FUTURE PLANS

**"PEC FOUNDATION" TO UNDERTAKE THE COMPREHENSIVE
PROJECT FEASIBILITY, PLANNING, IMPLEMENTATION & OVERALL
PROJECT MANAGEMENT FOR DIAMER - BASHA DAM
BY UTILIZING THE ENGINEERS' SERVICES FROM ALL PROVINCES**





FUTURE PLANS

LOW COST HOUSING PROJECT UNDER ENGINEERS FOUNDATION





FUTURE PLANS

Introducing

SPECIALIZED AND CERTIFICATION COURSES

(PMP, OSHA, ISO, CISCO, etc.)



for engineers to increase employment
opportunities at national and international



FUTURE PLANS

TO ENSURE ROLE OF ENGINEERS IN POLICY MAKING,
PEC PROPOSED

SERVICE STRUCTURE FOR PROSPERITY OF PAKISTAN





WAY FORWARD

- Amendments in PEC Act & Bye-Laws
- Service Structure for Engineers
- MoUs between PEC & Ministry of IPC for PMYTS internships scheme through MoST
- Technocrat seat in Senate for Engineers



THANK YOU

PAKISTAN ENGINEERING COUNCIL