



SEMINAR ON

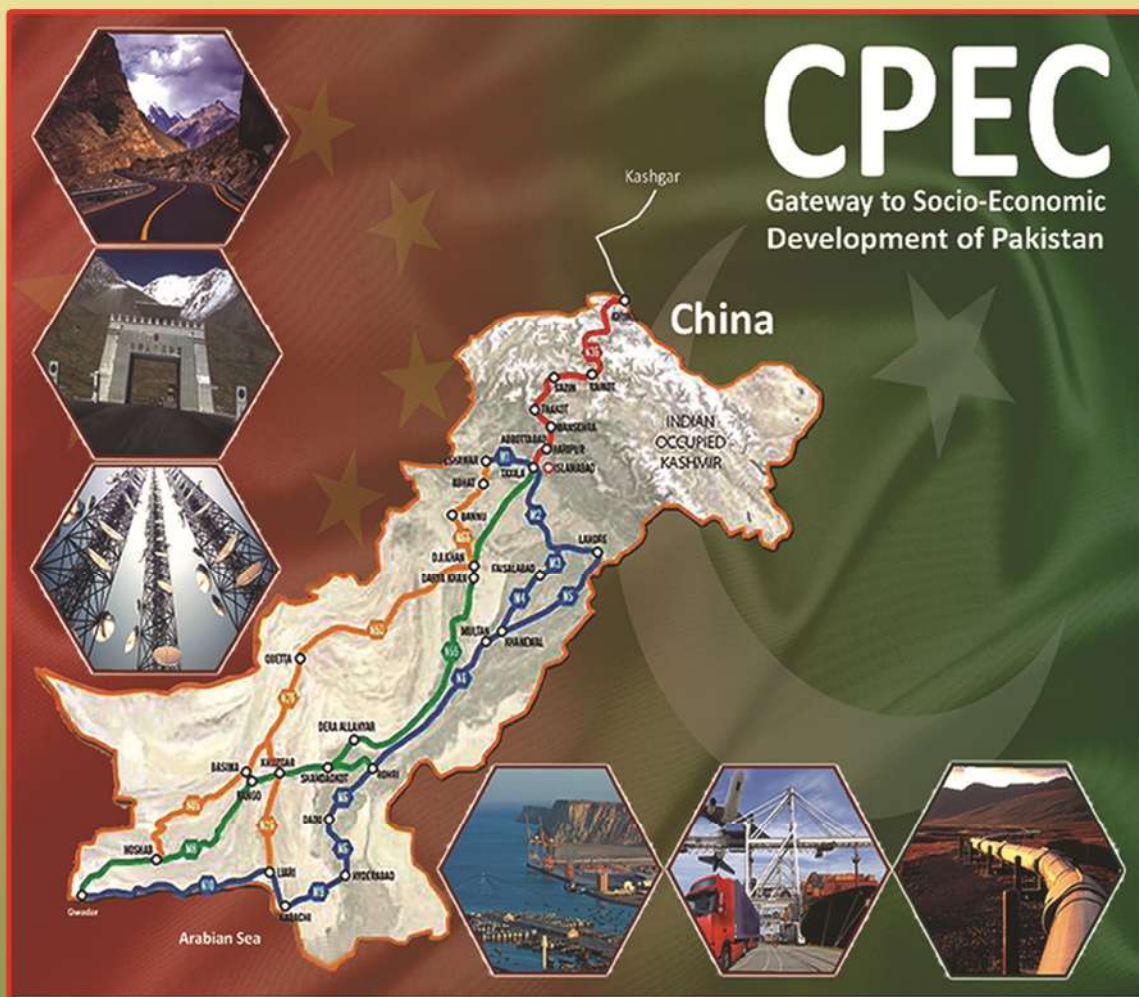
CHINA PAKISTAN ECONOMIC CORRIDOR OPPORTUNITIES & CHALLENGES



29TH MARCH 2017 AT JINNAH AUDITORIUM, NUST

JOINTLY ORGANIZED BY

The Institution of Engineers, Pakistan (IEP)
AND
NATIONAL UNIVERSITY OF SCIENCES & TECHNOLOGY (NUST)



SPONSORS





In the message to the First Inaugural Meeting of the Institution held on 20th June, 1948, Quaid-e-Azam Muhammad Ali Jinnah said:

"If Pakistan is to take its proper place among the progressive nations of the world, it will have to take up a good deal of leeway in the realm of scientific and technical education which is so necessary for the proper development of the country and the utilization of its resources. The establishment of institution like the institute of Engineers will greatly stimulate technical research and help in disseminating available information. The Institution of Engineers will not only benefit the engineers themselves by improving their technical knowledge but also bring lasting benefit to public service which they are called upon to perform. I wish the institute every success"

CPEC Seminar Programme 29th March 2017

1.	Guests to be Seated		1030 hrs
2.	Arrival of the Chief Guest		1100
3.	National Anthem		1102 hrs
4.	Recitation from the Holy Quran		1105 hrs
5.	Welcome Address by Engr. Dr. Izhar ul Haq President, IEP		1110 hrs
6.	Opening Remarks by Lt. Gen. Naweed Zaman, HI (M) (Retired), Rector NUST		1120 hrs
7.	Address by Federal Minister		1130 hrs
8.	Address by Chinese Ambassador		1140 hrs
9.	Address by Chief Guest		1150 hrs
10.	Tea (After the Address by the Chief Guest)		
	Technical Session - 1		
11.	Lt. General Muhammad Afzal	Advantages Of Cpec For Pakistan And China And Exploitation Of Opportunities Afforded By Cpec	1230 hrs
12.	Engr. Riaz Nazir Tarar	Priority Hydro Power Projects Under China Pakistan Economic Corridor.	1250 hrs
13.	Dr. Sajjad Hussain Baloch	Gwadar A Mega City	1310 hrs
14.	Engr. Dostain Khan Jamal deni	Gwadar Port: Its Opportunities & Challenges as CPEC Gateway	1330 hrs
15.	Dr. Attaullah Shah	Role of China in the economic development of developing Countries a case study.	1350 hrs
16.	Discussion (Q/A)		1410 hrs
17.	Concluding Remarks by Session Chairman / Shields distribution		1420 hrs
18.	Lunch break		1430 hrs
	Technical Session - 2 Engr. Prof. Dr. Niaz Ahmad Akhtar		
19.	Rear Admiral Munir Wahid	Gwadar Port A center – Piece of Pak-China Strategic Co-Operation Master Plan & Vision for Port Development	1520 hrs
20.	Dr Muhammad Jawed Iqbal	Combating Natural Hazards along CPEC	1540 hrs
21.	Mr. Sardar Shaukat Popal Zai	Definition & Scope of China's 13 th 5 years' plan and its goals, importance and objectives of CPEC	1600 hrs
22.	Engr. Rai Waqas Azfar	CPEC – Challenges and Opportunities	1620 hrs
23.	Engr. Mohsin M. Syed	Enterprise Hospitality Beauty	1640 hrs
24.	Discussion (Q/A)		1700 hrs
25.	Concluding Remarks by Session Chairman / Shields distribution		1710 hrs
26.	Vote of Thanks		1720 hrs
27.	Shields to organizers		1725 hrs
28.	Tea		1730 hrs

INTRODUCTION OF IEP

The Institution of Engineers, Pakistan was founded on May 07, 1948 with the blessings of the Father of the Nation Quaid-e-Azam Muhammad Ali Jinnah with its Headquarters at Dacca, the then Capital of East Pakistan. After the creation of Bangladesh in 1971, its Headquarters was established at Lahore.

IEP is the largest body of professional Engineers in Pakistan and provides a forum for the professional development of Engineers through a wide range of activities and programs. The Institution plays an important role for the dissemination of knowledge amongst the fellow Engineers and in the development of Engineering and Science in the Country.

It has 9 Local Centers throughout the country and has about 12000 corporate members. The affairs of the Institution are managed through elected Councils and other office bearers in accordance with the Constitution and Bye-Laws. The Central Council is elected for a 3-years term and has all the powers of the Governing Body. It has also two overseas chapters in Saudi Arabia and Bahrain. IEP has a separate IEP Women Engineers Forum so that they can play their role in the development of the country.

The IEP has bilateral relations with 39 professional societies and institutions abroad. It represents Pakistan in the World Federation of Engineering Organizations (WFEO), Federation of Engineering Institutions of South and Central Asia (FEISCA) as well as Federation of Engineering Institutions of Islamic Countries (FEIIC), the Commonwealth Engineers Council (CEC) UK and American Association for Advancement of Science (AAAS).

IEP publishes a journal 'The Pakistan Engineer' quarterly. It conducts various technical courses, lectures, seminars and symposia, workshops and group discussions through its vast network of Local Centers. The Institution also invites foreign experts to the country during the International Congress/seminars so that Pakistani engineers can interact with them to exchange scientific and technical knowledge.

INTRODUCTION OF NUST

The National University of Sciences & Technology, commonly referred to as NUST, is a public research university with main campus at Islamabad, Pakistan and sub-campuses at Karachi, Risalpur and Rawalpindi. From a modest beginning with military engineering colleges, NUST has gained towering stature, both at the national as well as international, level addressing the needs of a fast changing world. The University main campus continues to expand, both academically and in terms of physical environment, whereas, its commitment to scientific leadership continues to grow unabated. It is now recognized internationally as a research-led, socially-engaged university, distinguished by its multi disciplinary programmes and focus on emerging technologies.



**Message from Mr. Mamnoon Hussain
President of Islamic Republic of Pakistan**

It gives me great pleasure to learn that Institution of Engineer's Pakistan (IEP) and National University of Sciences and Technology (NUST) are jointly organizing an international Seminar on "China-Pakistan Economic Corridor (CPEC) - Opportunities and Challenges".

CPEC is a framework of regional connectivity which will not only benefit Pakistan and China but the entire region. This landmark project has the potential to realize the dream of shared goals, destiny, harmony and collective development through enhancement of geographical linkages by improving road, rail and air transportation system. Furthermore, after the operationalization of this mega venture there will be robust flow of trade and business activities which will create a win-win scenario for all the stakeholders.

The signing of economic agreement between Pakistan and China in the form of CPEC is a testament of growing ties between the two neighbours which will have positive impact for peace, progress and prosperity of the region. As a result, Pakistan has emerged as an attractive destination for both local and foreign investment. The completion of this project would greatly benefit the underdeveloped regions of Pakistan and bring them at par with developed areas of the country.

This economic corridor will link Kashghor of China with Gwadar seaport of Pakistan. The Central Asian States and other countries have also evinced keen interest in linking up with CPEC to reap maximum dividends from it. CPEC would not only enhance regional connectivity in terms of infrastructure development, it would also lead to economic integration of regional economies.

The candid discussion and free exchange of ideas during the seminar will help in chalking out a way forward on how to derive optimal benefits from the emerging opportunities and possibilities. I am confident that valuable suggestions put forth during the seminar will help in addressing the challenges posed to this project of hope and progress.

I congratulate IEP and NUST for their excellent efforts and hope that they will continue organizing such seminars to raise awareness about this all important project.



**Message from Mian Muhammad Nawaz Sharif
Prime Minister of Islamic Republic of Pakistan**

It is my immense pleasure to learn that Institution of Engineers Pakistan (IEP) and National University of Science and Technology are jointly holding an international seminar on “China Pakistan Economic Corridor (CPEC) – Opportunities and Challenges” to manifest the importance of the most significant project of the country.

CPEC is not merely a strategic agreement but is an advanced stage of relationship in the history of cooperation and collaboration between China and Pakistan, which is peak of very special relationship between the two countries. CPEC is the most important initiative of 21st century, which will **help the entire region to get rid of deprivation, reducing poverty and to bringing peace and prosperity**, which perfectly complements Pakistan's vision 2025.

CPEC is an inspiring model of cooperation among developing countries with significant role in promoting of huge economic and development benefits to bring prosperity in the whole region. It will not only improve our infrastructure but would also provide the much needed knowhow, knowledge and expertise in new technologies.

We will leave no stone unturned in ensuring the CPEC and materialize all the projects under its umbrella within the given time so as to accomplish China's One Belt-One Road initiative, which will integrate development of various regions. CPEC will transform Pakistan into a regional hub of trade, commerce and manufacturing, whereas business and private sectors has an important role in promoting economic opportunities, innovation and high impact solutions.

CPEC is for the entire Pakistan and no region or province will be left out of it at the same time will integrate three regions of China, South Asia and Central Asia and will not only prove to be game changer but the fate-changer for the entire region. Pakistan would Insha Allah become Asia's Tiger and Balochistan would be tiger of the Pakistan after the completion of Gwadar project under CPEC.

I congratulate The Institution of Pakistan and National University of NUST for highlighting the very importance of the project through this international seminar.



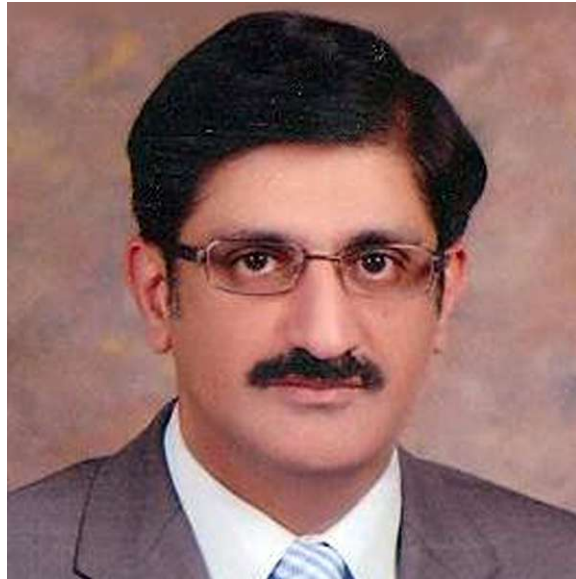
**Message from Muhammad Shahbaz Sharif
Chief Minister Punjab**

It gives great pleasure to know that Institution of Engineers Pakistan and National University of Sciences and Technology are jointly organizing the Seminar on “China Pakistan Economic-Opportunities & Challenges on 29th March 2017.

China Pakistan Economic Corridor (CPEC) Project is a game changer for the entire region as it would bring prosperity and political stability to the country .I am sure that the projects under CPEC will create thousands of jobs for professional and skilled workers. It would generate power in thousands of megawatts and boost the Industry. The industrial zones being established in all provinces of Pakistan would ultimately increase the GDP of Pakistan. National university of Sciences & Technology and other universities will establish strong academic linkages with the universities of China for advancement of science and Technology between two brotherly countries.

I commend the role of IEP and NUST in promoting engineering science and practices and awareness among public about National issues relating to the development of Country.

I wish organizers of the Seminar every success in their endeavors.



**Message from Engr. Syed Murad Ali Shah
Chief Minister Sindh**

I am pleased to know that the Institution of Engineers Pakistan is holding a very important Seminar on "China Pakistan Economic Corridor Opportunities and Challenges" on 29th March 2017 with the collaboration of National University of sciences & Technology. Records show that during its long history of 69 years the Institution has contributed a lot towards Pakistan's growth, development and prosperity with collaboration of National / International professional Engineering organizations and Educational Institutions.

It is the need of hour to increase the contribution of professional Engineers towards meeting the aspirations of the Nation for improving Socio-economic Conditions in the country by accepting the challenges and availing the opportunities of CPEC.

China Pakistan Economic Corridor (CPEC) Project is a game changer for the entire region as it would bring peace, prosperity and political stability to the country. I am sure that the projects under CPEC will create thousands of jobs for professional and skilled workers. It would also generate thousands of megawatts power and boost the confidence of international investors to invest in the proposed industrial zones being established in all provinces of Pakistan. I am confident that under CPEC the National university of Sciences & Technology will establish strong academic linkages with the universities of China for advancement of Science & Technology between the two countries.

I commend the role of the IEP & NUST in promoting engineering science and practice and awareness among public about National issues relating to the development of Country.

I wish organizers of the Seminar every success in their endeavors.



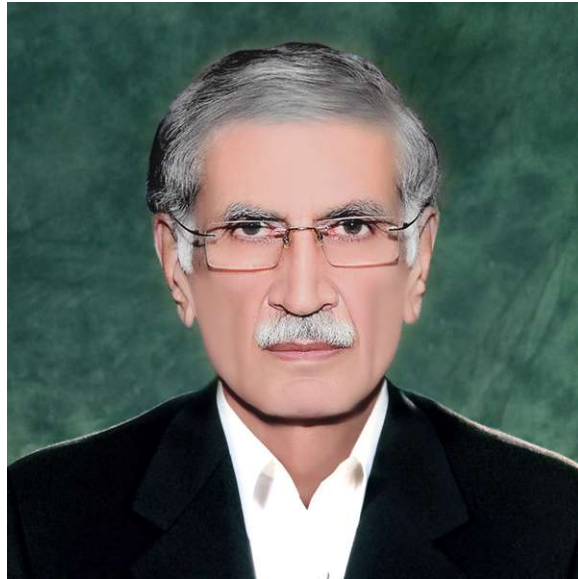
**Message from Nawab Sanaullah Khan Zehri
Chief Minister Baluchistan**

I am pleased to know that the Institution of Engineers Pakistan (IEP) and National University of Science & Technology (NUST) are jointly holding a Seminar on “China Pakistan Economic Corridor – Opportunities & Challenges” on 29th March 2017 in Jinnah Auditorium (NUST) Islamabad. It is very much appreciable that the organizers have selected a very important topic of the Seminar relevant to CPEC.

One simply cannot visualize the Economic, industrial and social progress without Engineers. It is heartening to know that Institution of Engineering and National University of Science and Technology (NUST) are contributing towards re-building and strengthening of Pakistan.

Balochistan is endowed with plenty of natural resources, such as Iron, Gold, Copper, Lead and Gem-Stones. At present hardly a fraction of these reserves are being exploited commercially. There exists a rich potential yet to be harnessed for the well being of the nation and engineers need to play due role in this direction. I shall urge the engineers particularly the young engineers of Balochistan to come forward and avail the opportunities of CPEC, confront the challenges and exploit mineral wealth of the largest province.

I wish the Seminar all success.



**Message from Pervez Khattak
Chief Minister Khyber Pakhtunkhwa**

I am pleased that the Institution of Engineers, Pakistan and National University of Science and Technology (NUST) are jointly organizing a Seminar on “China Pakistan Economic Corridor opportunities and Challenges”. CPEC will bring development, progress and economic stability to country. The deprivation of the people of Pakistan would come to an end as the mega project would culminate into many industrial and infrastructure projects together with plenty of job opportunities for professional and skilled person.

Our government is making all out efforts to improve the living standards of the people of Khyber Pakhtunkhwa and underdeveloped areas with the aim to bring these at par with developed and prosperous areas. Remote areas of Khyber Pakhtunkhwa have already been connected with all big and small cities of the country through road link while vast network of roads is under construction.

Timely completion of CPEC related projects is the need of hour and our Engineers have to play very important role in this regard. I stress upon the young and experienced Engineers to work hard to achieve the targets and play their role effectively and honestly.

In the end, I congratulate the Institution of Engineers, Pakistan and National University of Science and Technology for organizing the seminar.



**Message from Engr. Prof. Ahsan Iqbal
Federal Minister for Planning, Reforms and Development**

I am deeply touched to know about holding of an international Seminar on “China Pakistan Economic Corridor (CPEC) – Opportunities and Challenges” being jointly arranged by Institution of Engineers Pakistan (IEP) and National University of Science and Technology (NUST).

The ambitious CPEC programme has two main components. First plan is to develop a new trade and transport route from Kashgar in China to the Gwadar Port. The other component visualizes developing special economic zones along the route, including power projects. Government of Pakistan has a strategic plan to set up 29 special economic zones (SEZs) to be located at different places of all the four provinces, which are to be identified by provincial governments themselves. The completion of these SEZs will play key role in increasing our industrial capacity, magnifying the exports base and will push forward the economic and social development alongwith the growth in domestic economy. The implementation of energy and infrastructure projects identified under the China-Pakistan Economic Corridor is being done on a fast track to translate the plans into reality. Given the timeline for completion, these power projects will add reasonable generation by 2017-18.

In Pakistan, CPEC projects are being managed primarily by the Ministry of Planning, Reform, and Development in partnership with China’s National Development and Reform Committee (NDRC). The two sides have established a Joint Cooperation Committee with working groups focused on four main areas i.e the Gwadar Port, transport infrastructure, energy, and industrial cooperation.

I congratulate to the Institution of Engineers Pakistan and National University of Science and Technology for highlighting the importance of CPEC, which carries tremendous promises for Pakistan.



**Message from Rana Tanveer Hussain
Federal Minister for Science and Technology**

I am glad to learn that Institution of Engineers Pakistan (IEP) and National University of Science and Technology are jointly organizing an international seminar on “China Pakistan Economic Corridor (CPEC) – Opportunities and Challenges”, for projecting its salient features and benefits.

The CPEC is intended to promote connectivity across Pakistan with a network of highways, railways, and pipelines and consists of energy, industrial, and other infrastructure development projects to boost Pakistan’s economic growth. Eventually, the CPEC will also facilitate trade alongwith an overland route that connects China to the Indian Ocean, linking the Chinese city of Kashgar to the Pakistani port of Gwadar.

CPEC is part of a grand Chinese plan of Regional Economic Connectivity: the One Belt - One Road (OBOR) initiative. The highly ambitious plan calls for new state-directed investments in roads, railways, pipelines, ports, and information networks to deepen economic integration and connectivity across Asia and into Africa and Europe.

The CPEC will provide important benefits to Pakistan’s economy. Economic growth is vital to political stability, and therefore the project is considered to be a welcome development.

I appreciate the efforts of Institution of Engineers Pakistan and National University of Science and Technology for holding this seminar.

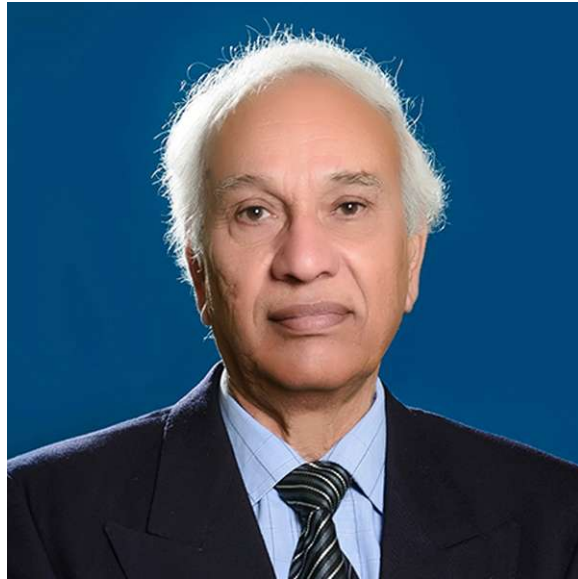


**Message from Khawaja Muhammad Asif
Federal Minister for Ministry of Water and Power Pakistan**

China Pakistan Economic Corridor (CPEC) is not just the name of a road or railway system but a mega project, which is beneficial for all the provinces of Pakistan and other countries in the region. When completed, Pakistan would have access to South and Central Asian countries and also to Europe, which will help Pakistan to emerge as trading hub. It will bring an economic revolution and business activities will get a much needed boost, making reduction in unemployment, peace and prosperity in the country.

CPEC, which starts from Kashgar, Xinjiang runs throughout the whole of Pakistan and finally reaches Gwadar Port in the south. It is a comprehensive package of cooperative initiatives and projects which cover diverse spheres, covering major areas of Pakistan. The project consists of energy and infrastructure projects and economic zones. The construction of these projects will promote the flow of goods, information, and other resources. Both the sides have successfully built Gomal Zam Dam, Khan Khawar Hydropower station, Duber Khawar Hydropower Station. Terbel Dam Phase IV is now under construction and projects such as Suki-Kinari Hydropower Station and Keyal Khwar Hydropower station are to be built. The Corridor visualizes short, medium and long term objectives as well as benefits which would incrementally transform this belt into prosperous and economically sound region. Industrial zones will also enhance the pace of development in various fields of economy. The Corridor will bring more opportunities for cooperation and result into more jobs opportunities to our people.

I wish for success of the event and congratulate both, The Institution of Engineers Pakistan and National University of Science and Technology for holding this valuable seminar.



**Message from Dr. Izhar ul Haq
President, IEP**

I am very pleased that Institution of Engineers, Pakistan (IEP) and National University of Science and Technology (NUST) have joined hands to organize an important seminar on China Pakistan Economic Corridor (CPEC)-Opportunities and Challenges on 29th Mar, 2017. IEP is the leading professional body founded by Qaid-e-Azam Muhammad Ali Jinnah for promoting Engineering, Technology and Allied Sciences. Effective dissemination of Engineering and professional knowledge is being done, in accordance with primary aims and objectives of the Institution. Lectures, seminars, conferences, symposia and workshops on national issues are regular features of the Institution.

Pakistan and China have forged a strong and long-lasting co-operation in various fields for economic development of both countries. Pakistan's strategic location and multiple natural resources along with human resources are our invaluable assets.

CPEC provides us an opportunity to carry out major development works in Energy, Infrastructure, Transportation and Communication fields and has the potential to change the destiny of our region and people. Our Engineers have the challenge to execute these projects on time within the available resources and best quality.

Close co-operation with the local Industry and prestigious Universities of Pakistan with a culture of responsibility, discipline, accountability and merit is very important in this direction.

The seminar on CPEC will be of great significance and shall benefit all concerned by way of enhancing the knowhow about various projects and associated expectations and problems.



**Message from Lt. Gen. Naweed Zaman, HI (M) (R)
Rector NUST**

National University of Sciences & Technology (NUST) takes pride in the fact that it is the leading university of the country. The University having a strong engineering base, is poised to play a leading role to propel the country into knowledge-driven economy, thus improving the lives of masses and contributing towards betterment of society, through need based innovations, nurturing versatile and creative young minds who have the will and enthusiasm to make a difference and stride confidently into the future as society's torch bearers. The University's future roadmap has been aligned so as to spearhead national efforts to achieve United Nations Sustainable Development Goals (SDGs), Vision 2025 of the Government and CPEC plans. The manifestation of this Vision is imbibed in our plans to establish Pakistan's first Science and Technology Park, aimed at transiting the country towards high-tech export oriented economy. Also an indigenous Chinese Study Centre has recently been established at NUST to develop research activities on the campus, as well as strengthen cultural ties between the two countries. NUST is fully poised to identify opportunities and challenges being offered by CPEC Project. Its strong base in all domains of Engineering, supported by Social Sciences and its prime location makes it natural candidate to lead the strategy for collaboration in knowledge domain to meet the challenges of CPEC and beyond.

The seminar on "CPEC Opportunities & Challenges", co-jointly planned by NUST and The Institution of Engineers, Pakistan (IEP) is a great initiative indeed. I am positive that apart from highlighting the importance of CPEC for the country, the deliberations will help identify the challenges as well as propose measures to convert these to opportunities.



**Message from Mian Sultan Mahmood
Secretary General, IEP**

It is a matter of great pleasure that the Institution of Engineers Pakistan (IEP) and the National university of Sciences and Technology (NUST) are jointly holding the Seminar on the topic "CHINA PAKISTAN ECONOMIC CORRIDOR – OPPORTUNITIES & CHALLENGES". CPEC is the first mega project after a long time of launching Terbella Dam, Mangla Dam in 1960's and Motorway in late 1990's. In the presence of un-matching development to the rapidly growing population and inadequate utilization of natural resources and human capital, a mega project like CPEC was much needed for the survival of Pakistan, which when completed will spread development across Pakistan and will increase the quantum of its GDP, at the same time boosting up the economy of the entire region.

CPEC is a perception to build an economic corridor linking Gwader in Pakistan to Kashgar in China through populated areas, consisting of energy, transportation, infrastructures projects and economic zones along it. Completion of the corridor will promote rapid development in infrastructure, industrialization and economic uplift, reduction in poverty, maintenance of peace and political stability in the whole region.

Despite continued uncertainty in the global economy and passive external demand, improved industrial growth in Pakistan may gain further momentum due to investments under CPEC and this mega project will prove to be a breakthrough in world's history of trade corridors. The CPEC would be a strategic move forward, offered by China to revolutionize Pakistan's economy.

It is a matter of satisfaction that a premier professional Engineering organization The Institution of Engineers Pakistan and most prestigious university National University of Science and Technology" has jointly taken the responsibility for the national cause to let people know about the China-Pakistan Economic Corridor (CPEC). I pray for the success of this seminar.

WELCOME ADDRESS BY DR. IZHARULHAQ, PRESIDENT IEP

His Excellency President Mamnoon Hussain,
Honorable Ministers,
His Excellency, the Ambassador of China,
Respected Rector NUST
Distinguished Guests, Ladies and gentlemen,

Asalaamo Alaikum.

It gives me great pleasure to welcome you, on behalf of the Central Council of the Institution of Engineers, Pakistan to this historic Seminar on China Pakistan Economic Corridor “Opportunities and Challenges”. We are highly honored that the President of Pakistan Mr. Mamnoon Hussain who is also the Patron-in Chief of IEP, is among us today to inaugurate the Seminar. This indicates the importance the Government places on China Pakistan Economic Corridor.

The Institution of Engineers, Pakistan was founded in 1948 with the blessings of the Father of the Nation Quaid-e-Azam Muhammad Ali Jinnah with its Headquarters at Dacca, the then Capital of East Pakistan. After the creation of Bangladesh in 1971, its Headquarters was established at Lahore.

Ladies and Gentlemen

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It conducts various technical courses, lecturers, seminars and symposia, workshops and group discussions through its vast network of Local Centers. The Institution also

invites foreign experts to the country during the International Congress/seminars so that Pakistani engineers can interact with them to exchange scientific and technological knowledge. Today the President of Institution of Engineers Bangladesh is present here and I extend warmest welcome to him.

KRAKURAM Highway was built along the old Silk route in 1979 with the co-operation of

China. This 1,300 km road from Kashgar a city of China to Abbottabad in Pakistan is an all-weather road and connects Pakistan with China through Khunjrab pass. Now under the China Pakistan Economic corridor three major highways- Eastern route, Central route and western route traversing through Pakistan from Khunjrab in the North to Gawadar in South of Pakistan shall be built. Rail route from Gawadar to China shall also be built. Gawadar deep seaport shall be developed. Industrial zones shall be built along the corridor. Many energy projects shall be built in Pakistan to meet with the power demand.

Sir, the purpose of today's Seminar is to highlight the Opportunities and Challenges being generated by the China Pakistan Economic Corridor which is a major initiative of Chinese and Pakistani Governments. This mega Project consists of Energy, Infrastructure and Industrial Parks. Availability of energy would usher a new era of industrialization.

Islamic Republic of Pakistan is the sixth-most populous country of the world with a population of nearly 200 million people. Pakistan has 994-kilometer coastline along the Arabian Sea and the Gulf of Oman in the south and is bordered by India to the east, Afghanistan to the west, Iran to the southwest and China in the northeast. Thus Pakistan offers very economical route for transportation in the region. The regional connectivity through efficient transport network would bolster International trade and economic growth.

Ladies and Gentlemen

In today's Seminar 8 papers shall be presented. The speakers shall discuss the opportunities that will be created for Pakistan, China and other countries of the world with the execution of all the Projects associated with the CPEC and also the challenges in the way ahead. I hope the Seminar shall be of great value for all of us and all the stake holders.

In the end I thank you all for sparing time to come here to attend the seminar. I also thank the management of NUST for collaborating with IEP for the success of the Seminar.

Thank you Mr. President and all other dignitaries.

Pakistan Zindabad



Message of Greetings

The Institution of Engineers, Pakistan (IEP)
Seminar on “Discover China Pakistan Economic Corridor (CPEC) -
Opportunities and Challenges”

On behalf of Bureau Veritas, I would like to extend my heartfelt congratulations to the Institution of Engineers, Pakistan (IEP) on the occasion of its seminar on **“Discover China Pakistan Economic Corridor (CPEC) viz Opportunities and Challenges”**

As the premier professional body for engineers in Pakistan, the IEP has dedicated itself to sustain excellence and promote the interests of the engineering profession ever since Pakistan came into being. I am pleased to see that the IEP takes this much needed unique initiative; whereby, this seminar provides an excellent avenue to unfold the CPEC opportunities and challenges for Pakistan in general and engineering industry in particular.

Bureau Veritas being the platinum sponsors of the event wish all the participants a fruitful and successful Seminar and would continue to augment the efforts of IEP with the same dedication and spirit in the years ahead.

CAPTAIN SARFARAZ INAYATULLAH TI (M)
Country Marine Chief Executive
Bureau Veritas Pakistan
B Eng., MSc., MBA., DMS., P Eng., C Eng
F.P.W.S., F.I.E.P., F.R.I.N.A

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ABSTRACT OF PAPERS

of Seminar on

China Pakistan Economic Corridor Opportunities and Challenges

**Advantages of CPEC for Pakistan and China And
Exploitation of Opportunities Afforded by CPEC**

By

Lt. General Muhammad Afzal, DG FWO

ABSTRACT

CPEC is a win synergy for both the nations and the region. It is a rare opportunity for Pakistan to realize its true strategic and economic potential. FWO in its capacity is vigorously pursuing multi sectoral initiatives in sync with our socio-economic imperatives. This of course, if not gigantic, is at least a colossal undertaking requiring the private sector and financial institutions to come forward and join hands for expeditious implementation

Priority Hydro Power Projects Suggested for Construction Under China – Pakistan Economic Corridor

By

**Riaz Nazir Tarar, Dr. Izhar-ul-Haq, Muhammad Jabbar
Consultant NDC, Advisor WAPDA, Consultant NDC**

ABSTRACT

Current (2017), peak electricity demand of Pakistan's national grid is around 25000 MW. Against this, the installed capacity is around 22200 MW. Due to certain technical / financial constraints, this existing capacity is only able to provide about 20000 MW with a load-shedding of about 5000 MW. Conservatively projected demand upto 2025 is 46000 MW and may touch 68000 MW by 2030. To cope with the medium term demand it is being planned to install additional capacity of about 49000 MW. Out of this, share of hydro will be 12300 MW (25%) and that too under run-of-river mode. Thus reliance is being placed heavily on non-hydro options involving higher generation costs and additional imports of fossil fuels.

It is envisaged that about 12100 MW will be added through China-Pak Economic Corridor (CPEC), out of which hydro component will be only 2700 MW (22%). On the other hand, Diamer Basha Dam Project and downstream Indus cascade hydropower projects of Dasu, Pattan and Thakot are now in engineering preparedness status to enable their implementation by 2030. Besides adding a sizeable capacity of 15800 MW, this development will provide average annual generation of 73400 GWh at cost of 4 to 5 US¢ / kWh against thermal and renewable options ranging from 8 to 17 US¢ / kWh. Over and above, will be very large benefit to the highly stressed national agriculture sector due to additional water yield through the storage created behind these projects.

To capitalize the above opportunity, it is recommend that hydro development portfolio of CPEC be enhanced to include Indus cascade development in conjunction with Diamer Basha Dam Project. This should cover: Diamer Basha Dam Project (Stage-II); Dasu Hydropower Project (Stage II); Pattan Hydropower Project; and Thakot Hydropower Project.

Its Opportunities & Challenges as CPEC Gateway

By

Engr. Dostain Khan Jamldeni, DG GPA

ABSTRACT

Gwadar Port Master Plan sets the major objective of the massive port development to transform the existing port facilities, through further construction, into a major transshipment hub in the region, gateway for CARs, and as an industrial powerhouse of Gwadar. With the initiation of China-Pakistan Economic Corridor, yet another objective has been set: to serve as the Gateway of CPEC. Such a vast hinterland, no doubt, is the basis for working on multiple opportunities that exist in these fast-developing economies and small ports, which are in the Gulf region and on the East African coastline. Despite these huge opportunities, Gwadar Port has experienced a number of challenges during past one decade hampering its smooth and quick development gradually to achieve its raison d'être. Objective of this paper is to analyze both the opportunities and challenges of Gwadar Port and to suggest way-forwards for stakeholders from both public and private sectors.

Role of China in the economic development of developing Countries A case study of China Pakistan Economic Corridor –CPEC

By

**Engr. Dr. Attaullah Shah
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ABSTRACT

The foreign policy of modern China has been based on reforms and economic liberalization, with the aim of enabling China to make even greater contribution to stability and prosperity of

the World economy. The Chinese leadership is more interested in the improved infrastructure and security in the region to enhance their access to the global market and as such the visionary concept of Chinese leadership of One Belt One Road is to strengthen the road network with the rest of world. China Pakistan Economic Corridor Project (CPEC) was agreed between the two countries to connect the China City of Kashghar (Uighur) with the Gawadar port. The project aims at investment of \$46 billion in next 15 years in Pakistan, which will facilitate to restrict the infiltration of the terrorist into the two boundaries of Uighur areas of Chinese and northern areas of Pakistan including all along the CPEC rout upto Gwadar. The models that make this interaction explicit have combined elements of the New Economic Geography and as such the rapidly changing geopolitical situations, China and Pakistan relationships will play a major role in the development of the region.

Investment in the underdeveloped areas along the corridor will lead to their economic development. Modern infrastructure including roads, bridges, railway lines and other means of modern communications along the corridor will improve the means of communications in the region at par with international standards. These infrastructure projects when completed would open up the least developed districts of Baluchistan and Khyber Pakhtunkhwa and integrate them into the national economy.

Huge investment in the energy generation projects including mix of Hydel, Solar, wind and thermal energy sources will bring a revolution in the industrial growth and improvement in economy of Pakistan.

The completion of CPEC projects would bring prosperity and sustainability in the region. The proposed Special Economic Zones of underdeveloped areas and Minerals Processing Zones in Baluchistan and other parts of country will generate Economic activities that were not feasible in the absence of infrastructure and connectivity with the rest of the country and would create employment opportunities in the backward districts of Pakistan.

Gwadar Port – A Centerpiece of Pak – China Strategic Cooperation, its Master-plan & Vision for Port Development

By

Rear Admiral (R) Munir Wahid

ABSTRACT

Neglected for decades, the ancient town of Gwadar is now attaining its due recognition, thanks to the geo-strategic developments in the region, and the need for enhanced cooperation between China & Pakistan. Gwadar Port has rightly been termed as the centerpiece of China Pakistan Economic Corridor. To link China, specially the western China to Middle East and Africa, access through Gwadar Port reduces the distance to one fifth of the route through South China Sea and the Straits of Malaki. Hence, Gwadar Port provides the most favorable trade outlet to West China to reach the Arabian Sea and the Indian Ocean using the land bridge

passing through Pakistan. Thus, Gwadar Port has undeniable potential to become not only maritime hub of the region but also be a cause for large scale economic activities along the route from China to Gwadar and the vast land mass around this route.

The potential of Gwadar Port to play a pivotal role in realization of the high hopes of Pakistani nation attached with CPEC undisputable though, the pace of development at Gwadar and Gwadar Port is not enviable by any standards. Gwadar still suffers from shortage of basic civic amenities and the port has had little expansion/development since completion of its Phase 1 in 2005. Further, like any other venture of high significance, there are also a number of handicaps and challenges to fast development of the Port. However, with efforts in the right direction, the comparative advantages of Gwadar Port vis-à-vis the regional ports can be exploited to make the dream of economic rise of Pakistan come true. Needless to say though, that this is easily said than done. Concerted efforts with meticulous planning, holistic approach and well defined implementation plan with active participation of the Private Sector are needed to match call of the hour.

China Pakistan Economic Corridor 'CPEC' - Strategic Integration & Opportunities for Underdeveloped provinces of Pakistan

By

Sardar Shaukat Popalzai

HIGHLIGHTS OF PRESENTATION

- One Belt, One Road initiative - an economic instrument for the success of CPEC.
- Will present CPEC as a regional integrator with greater opportunity provider for the underdeveloped provinces of Pakistan precisely Balochistan.
- How Provinces will Shape the National Economic Agenda under CPEC.
- The Impact of CPEC on Pakistan's economy in the long run.
- Will explore upon benefits of CPEC developed projects in different economic sectors.
- Pakistan to become a transit state for the regional economic powers.



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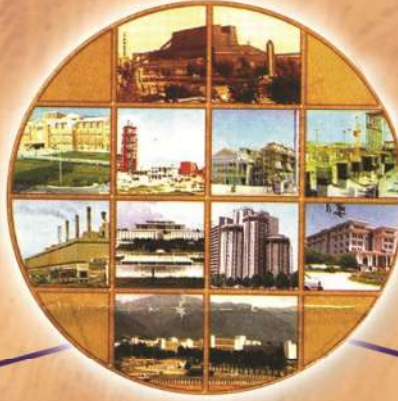
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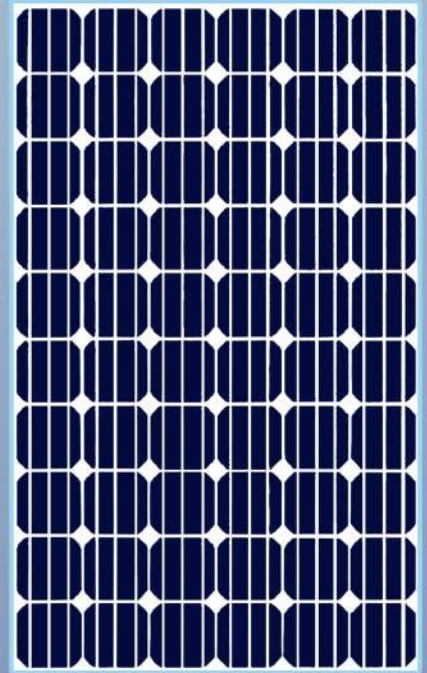
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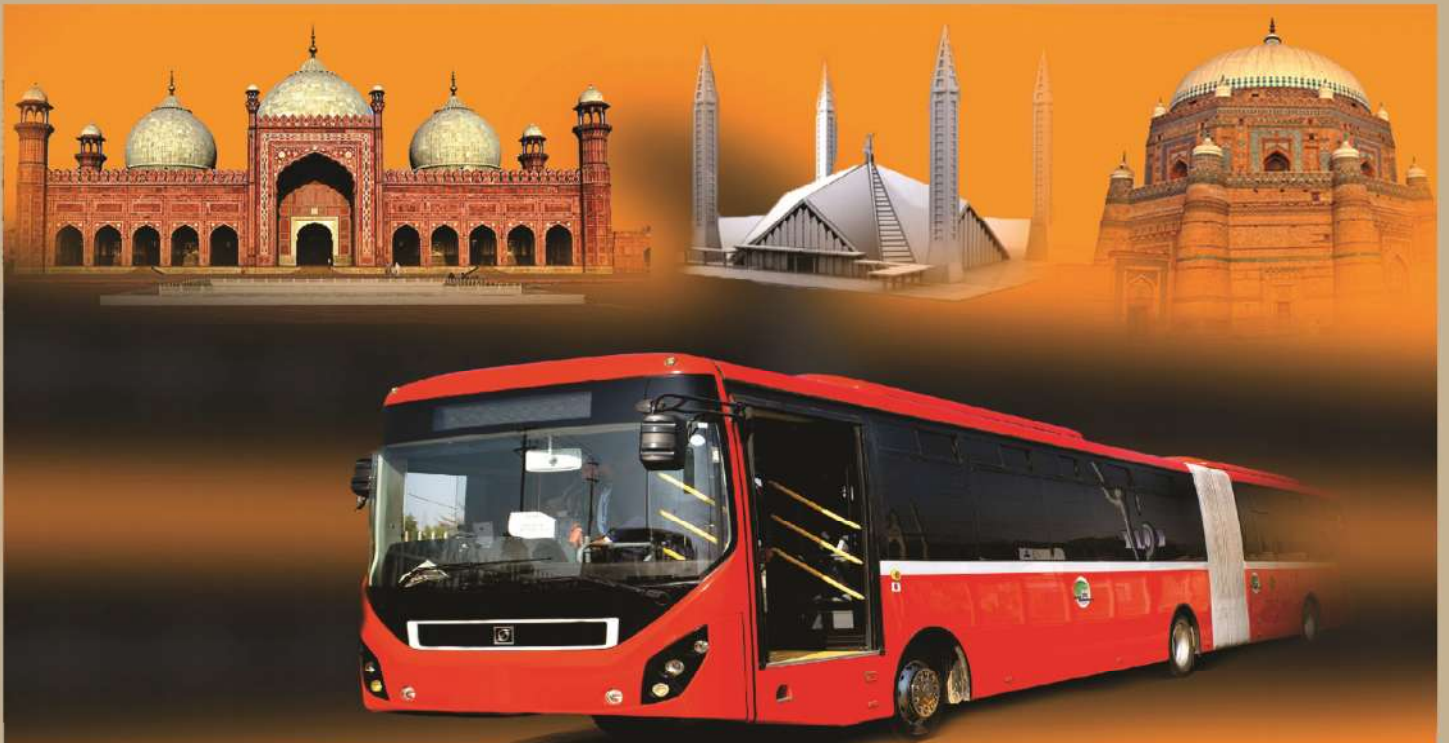
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