

Islamabad's Informal

China Study Circle



Twenty Four Session

Special Features of Roundtable

CPEC Projects Update

Date: 04/03/2019

Presented by: Anjum Gul

LTP 2017-2030

1+4 Key Areas

1. CPEC (as a core)

Prioritizing in

2. Energy
3. Connectivity (Transport, Infrastructure)
4. Gwadar
5. Industrial Cooperation

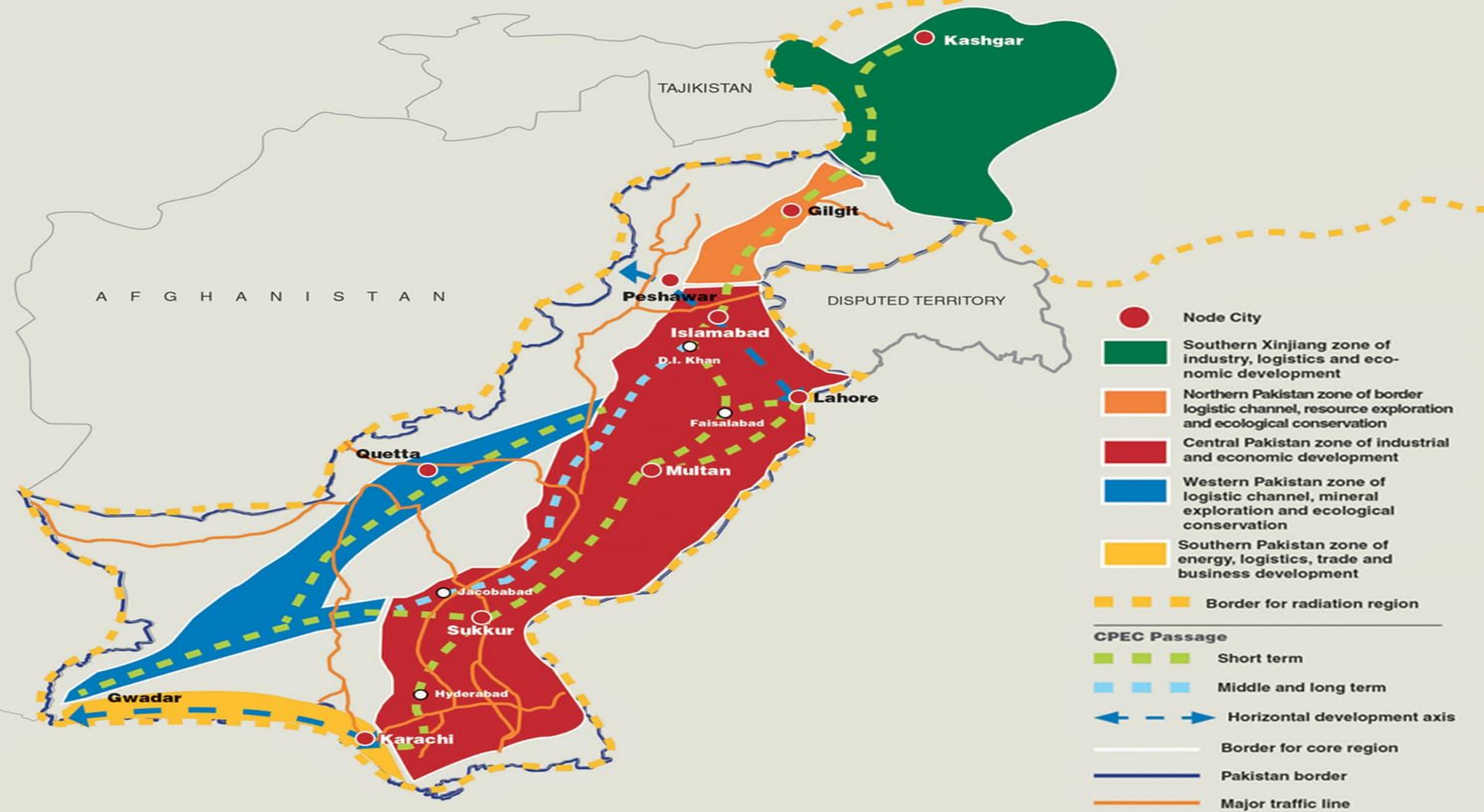
- Short term projects are up to 2020
- Medium term projects are up to 2025

KEY COOPERATION AREAS

1	CPEC	Collection of Infrastructure projects
2	Energy	Construction of projects of thermal power, hydropower, coal gasification, and renewable power generation
3	Connectivity	Construction of an integrated transport system, Information network infrastructure
4	Trade and Industrial Parks	Promote SEZs, rely on industrial parks, enhance capacity in agro, iron & steel, chemical and pharmaceutical, engineering goods, home appliances
5	Gwadar	Master City Plan

- Key functional zones.

- ▶ The CPEC is divided into the following five functional zones from north to south: Xinjiang foreign economic zone, northern border trade logistics and business corridor & ecological reserve, eastern and central plain economic zone, western logistics corridor business zone, and southern coastal logistics business zone. Most of the node cities, transportation corridors and industrial clusters are concentrated in them.



ENERGY

Coal Energy, Hydel Energy, Solar Energy & Wind Energy



List of Total Energy Projects

Priority Projects

No.	Project Name	Type	Location	Status	Deadline
1	2×660MW Coal-fired Power Plants at Port Qasim Karachi	Coal	Port Qasim, Karachi	Operational	2020
2	Sahiwal 2x660MW Coal-fired Power Plant, Punjab	Coal	Sahiwal	Operational	2020
3	300MW Imported Coal Based Power Project at Gwadar, Pakistan	Coal	Gwadar	LOI Issued	n.d.
4	SSRL Thar Coal Block-I 6.8 mtpa & SEC Mine Mouth Power Plant(2×660MW) (Shinghai)	Coal	Thar-Block-I	Ongoing	2020
5	CPHGC 1,320MW Coal-fired Power Plant, Hub, Balochistan	Coal	Hub, Balochistan	Ongoing	2020
6	Matiari to Lahore ±660kV HVDC Transmission Line Project	Coal	Matiari (Sindh) to Lahore (Punjab)	Ongoing	2025
7	Matiari (Port Qasim) —Faisalabad Transmission Line Project	Coal	Matiari (Port Qasim)-Faisalabad	Ongoing	2020
8	Thar Mine Mouth Oracle Power Plant (1320MW) & surface mine	Coal	Thar	LOI Stage	n.d.
9	Hydro China Dawood Wind Farm	Wind	Gharo, Thatta	Operational	2020
10	UEP Wind Farm	Wind	Jhimpir, Thatta	Operational	2020
11	Sachal Wind Farm	Wind	Jhimpir, Thatta	Operational	2020

No.	Project Name	Type	Location	Status	Deadline
12	Three Gorges Second Wind Power Project	Wind	Jhampir, Thatta	Operational	2020
13	Three Gorges Third Wind Power Project	Wind	Jhampir, Thatta	Operational	2020
14	Quaid-e-Azam 1000MW Solar Park	Solar	Bahawalpur	Operational	2020
15	Suki Kinari Hydropower Station	Water	Naran, KPK	Under construction	2025
16	Karot Hydropower Station	Water	River Jehlum, AJK / Punjab	Ongoing	2025

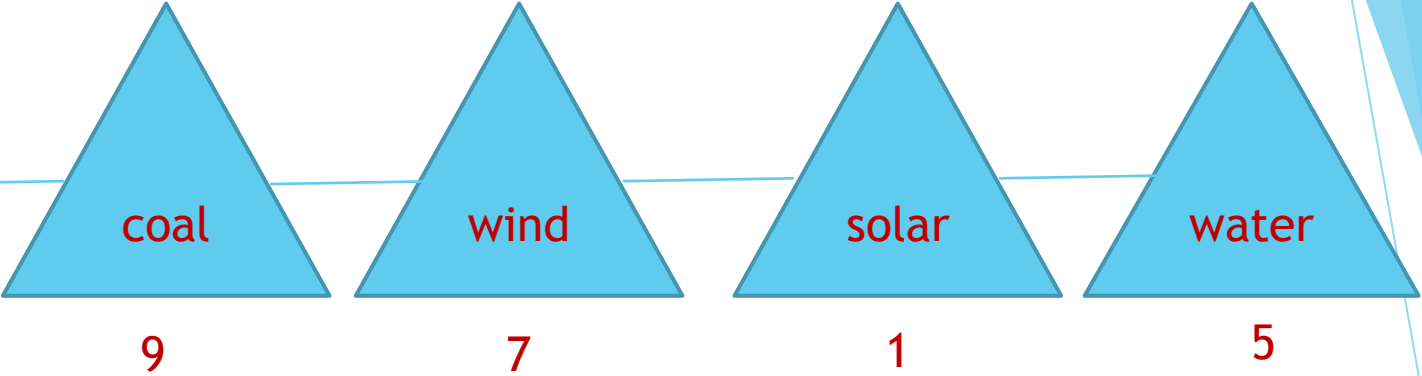
Actively Promoted Projects

No.	Project Name	Type	Location	Status	Deadline
17	Rahimyar khan imported fuel Power Plant 1320 MW	Coal	Rahimyar Khan	LOI Issued	n.d.
18	Cacho 50MW Wind Power Project	Wind	Jhampir, District Thatta	LOI Stage	n.d.
19	Western Energy (Pvt.) Ltd. 50MW Wind Power Project	Wind	Jhampir, District Thatta	LOI Stage	n.d.
20	Kohala Hydel Project, AJK	Water	Jhelum River near Muzaffarabad	Ongoing	2025

Potential Energy Projects

No.	Project Name	Type	Location	Status	Deadline
21	Phandar Hydropower Station	Water	Gilgit Baltistan	Under Review	n.d.
22	Gilgit KIU Hydropower	Water	Gilgit Baltistan	Under Review	n.d.

Energy Projects



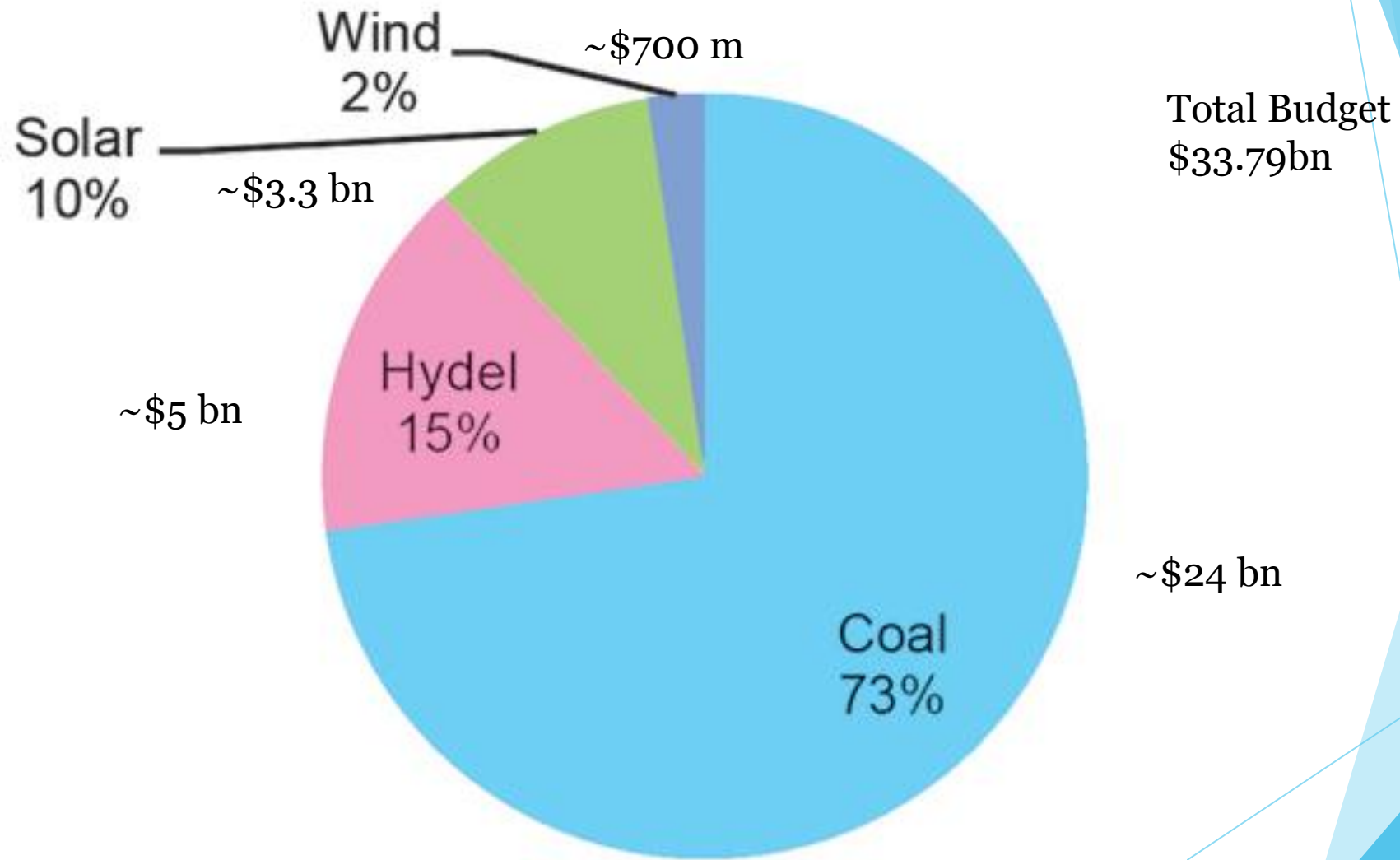
Priority projects 16

Actively promoted projects 4

Potential energy projects 2

2020	2025	N.D.
11	3	2
0	1	3
0	0	2

CPEC Power Projects by Fuel



Source: Planning Commission

(8)

Energy Priority Projects

~\$ US 6 b

~\$ US 4 b

Coal

(2)

~\$ US 1.3 b

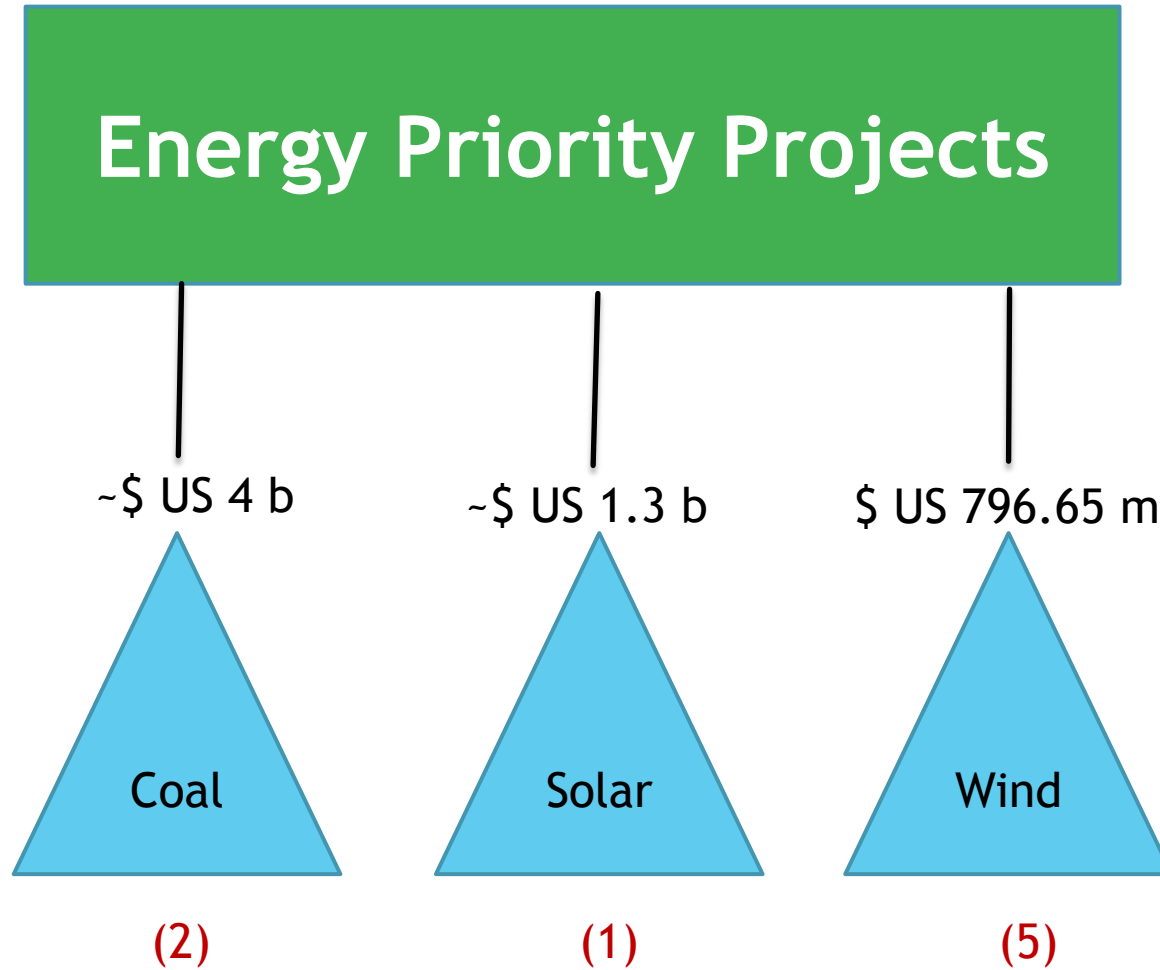
Solar

(1)

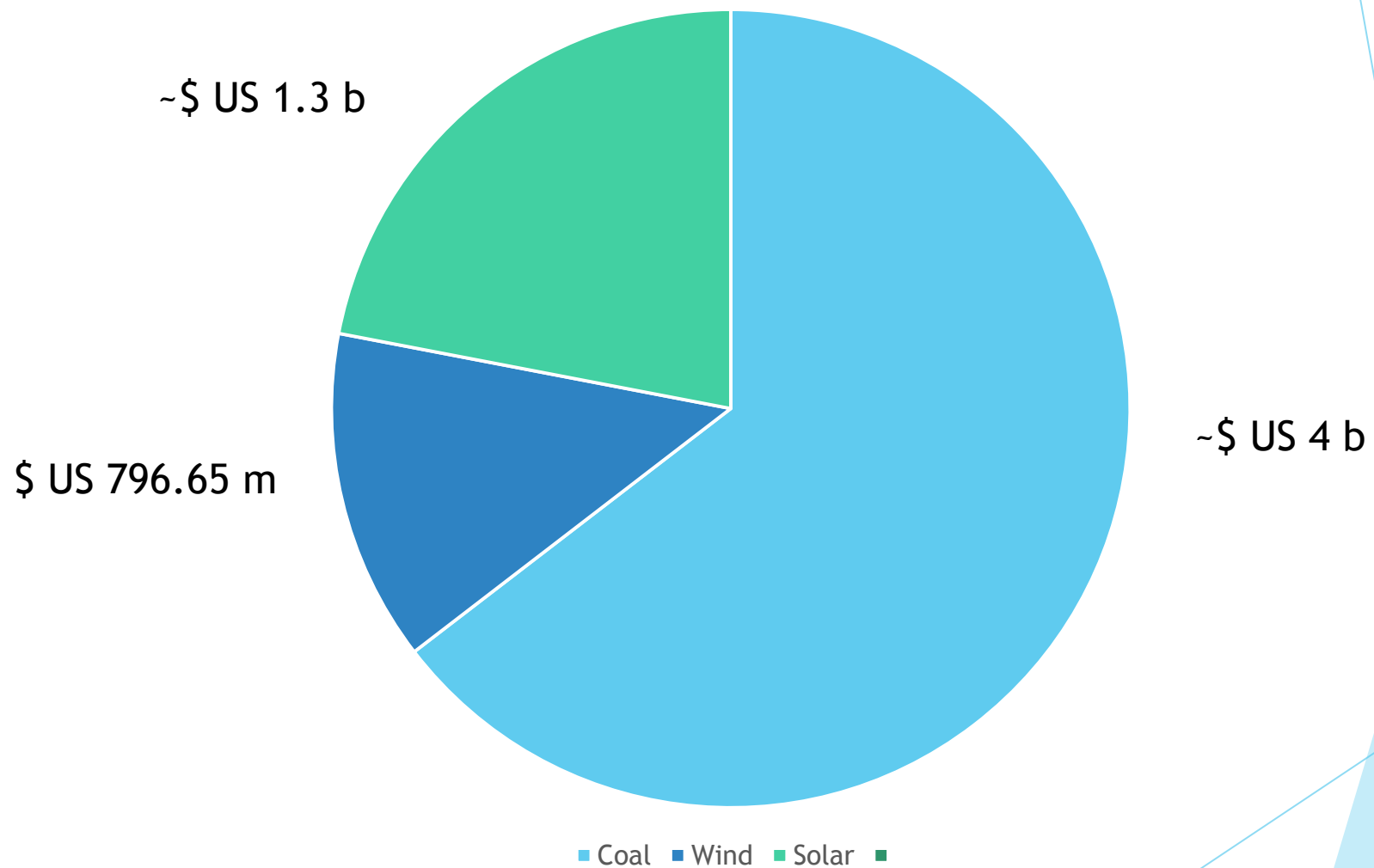
\$ US 796.65 m

Wind

(5)



Total Cost of Completed Projects ~\$ US 6 b



Operational Projects- Energy

No.	Project Name	Type	Location	Funding(\$ US m)	Executing Company	Sponsor
1	2×660MW Coal-fired Power Plants	Coal	Port Qasim, Karachi	1912.2	Port Qasim Electric Power Company (Private) Limited	IPP
2	2×660MW Coal-fired Power Plants	Coal	Sahiwal	1912.2	Huaneng Shandong Rui Group, China	IPP
3	Hydro China Dawood Wind Farm	Wind	Gharo, Thatta	112.65	Hydrochina Dawood Power Pvt. Limited (HDPPL)	IPP
4	UEP Wind Farm	Wind	Jhimpir, Thatta	250	UEP Wind Power Pvt. Limited (UEPL)	IPP
5	Sachal Wind Farm	Wind	Jhimpir, Thatta	134	Sachal Energy Development Pvt. Limited (SEDPL)	IPP
6	Three Gorges Second Wind Power Project	Wind	Jhimpir, Thatta	150	TGSWF & TGTWF	IPP
7	Three Gorges Second Wind Power Project	Wind	Jhimpir, Thatta	150	TGSWF & TGTWF	IPP
8	Qaid-e-Azam 1000MW Solar Park	Solar	Bahawalpur	1302	Zonergy	IPP

Port Qasim Electric Power Plant

Type

Coal (imported)

Location

Port Qasim Karachi

Deadline

2020

Budget

~\$ US 2 b



Port Qasim Electric Power Plant

OWNERSHIP



Sinohydro Resources **51% stake**

Is a state owned company of China. It

Is a subsidiary of PowerChina

representing offices in 84 countries



Al Mirqab Group **49% stake**

Is a subsidiary of Qatar based QInvest

Finance

China EXIM Bank

Contractors

Harbin Electric

Boilers

Dongfang Electric Corporation (DEC)

Generators

Power China

Coal Unloading Jetty and Channel

Hebei Electric Power Design and Research Institute (HBED)

Site Selection & Survey

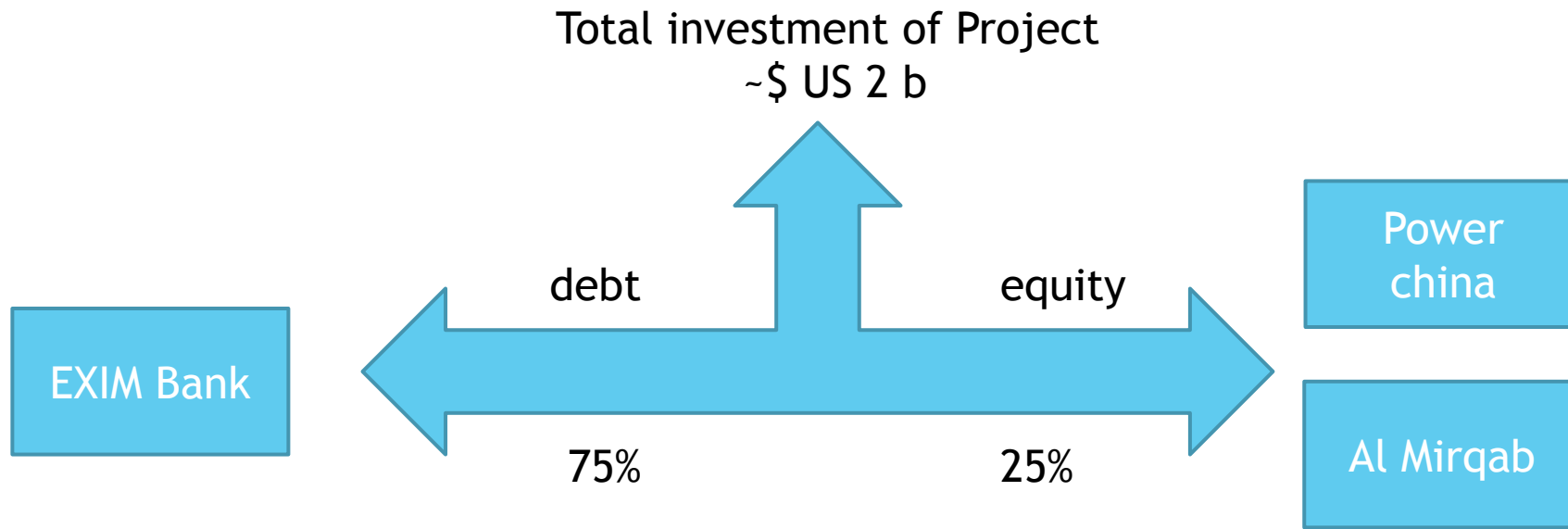
CCCC Second Harbor Consultants

Management Consulting
(supervision)

Services for the coal unloading
jetty

<https://pk.chineseembassy.org/eng/zbqx/P020181230760035767518.pdf>

<https://pk.chineseembassy.org/eng/zbqx/CPEC/t1627103.htm>



Capacity: 1320 MW
Super Critical Thermal Technology
1st Unit Installed: Nov 2017
2nd Unit Installed: June 2018

Sahiwal Coal Power Plant

Type

Coal (Imported from
Indonesia and South
Africa)

Location

Sahiwal, Punjab

Deadline

2020

Budget

~\$ US 1.8 b



Sahiwal Coal Power Plant

OWNERSHIP



Huaneng Shandong Power

Generation Co. Ltd. A private limited

company, based in Jinan,

incorporated in 2008, subsidiary of

China Huaneng Group

Shandong Ruyi Science & Technology

Group. National enterprise, is a subsidiary of Jining

Ruyi Investment Co., Ltd. Group also operates

entity investment

Finance

Chinese Consortium

Industrial and Commercial Bank of China

Contractors

SEPCO II

<https://pk.chineseembassy.org/eng/zbqx/P020181230760035767518.pdf>

<https://pk.chineseembassy.org/eng/zbqx/CPEC/t1627100.htm>

Total investment of Project
~\$ US 1.8 b

Industrial and
Commercial
Bank of China

Chinese
Consortium

debt

equity

Huaneng Shandong Power
Generation Co. Ltd

Shandong Ruyi Science & Technology
Group

No data available for funding ratio

Capacity: 1320 MW

Super Critical Technology

1st Unit installed May 2017

2nd Unit Installed July 2017

HydroChina Dawood Wind Farm

Type

Wind

Location

Gharo, Thatta

Deadline

2020

Budget

\$ US 115 m





OWNERSHIP

Hydrochina Dawood Power Pvt. Ltd. is a subsidiary of PowerChina acquired majority shares of Dawood power Pvt. Ltd. in 2012. PowerChina is China's state owned mega-scale power construction group

Finance

Industrial and Commercial Bank of China

Contractors

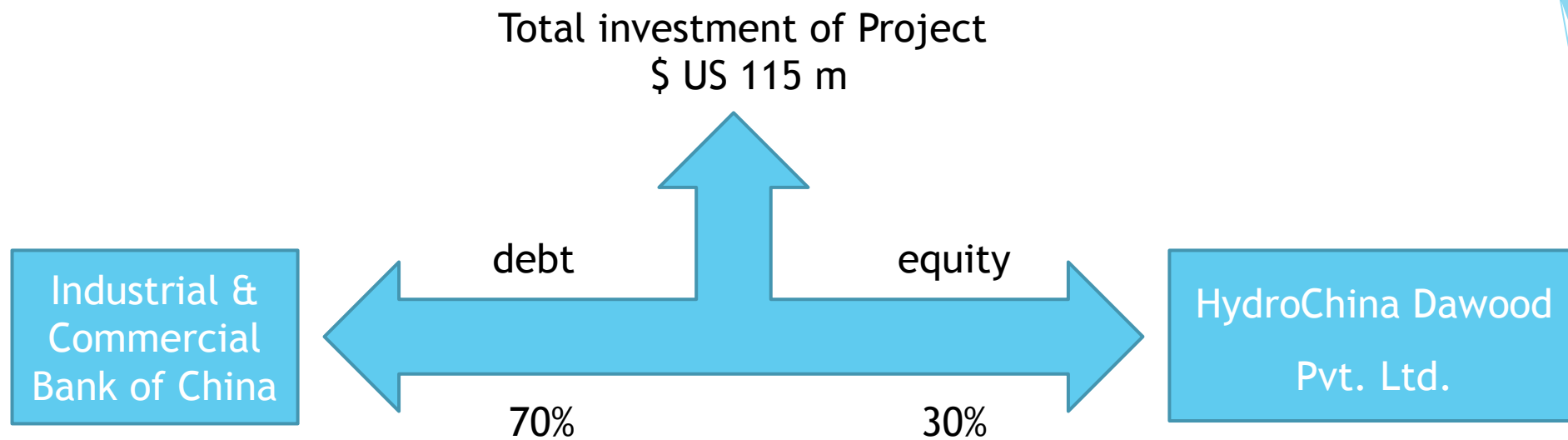
Ming Yang Wind Power Group Limited

German firm Aerodyn

Powerchina Xibei Engineering company limited

<https://pk.chineseembassy.org/eng/zbqx/P020181230760035767518.pdf>

<https://pk.chineseembassy.org/eng/zbqx/CPEC/t1627097.htm>



Capacity: 49.5 MW

Technology Wind Turbine

Unit installed April 2017

<http://aedb.org/88-highlights/95-m-s-hydro-china-dawood-power-pvt-limited-achieved-financial-close-for-50-mw-wind-power-project>

UEP Wind Farm

Type

Wind

Location

Jhimpir, Thatta

Deadline

2020

Budget

\$ US 252 m



OWNERSHIP

 Orient Group Investment Holdings
Co., Ltd. (99%)

Based in China

United Energy Group Co., Ltd. (1%)

is a leading independent Exploration and Production (“E&P”) company
headquarters are located in Hong Kong with subsidiaries in China and Pakistan.

Finance

China Development Bank

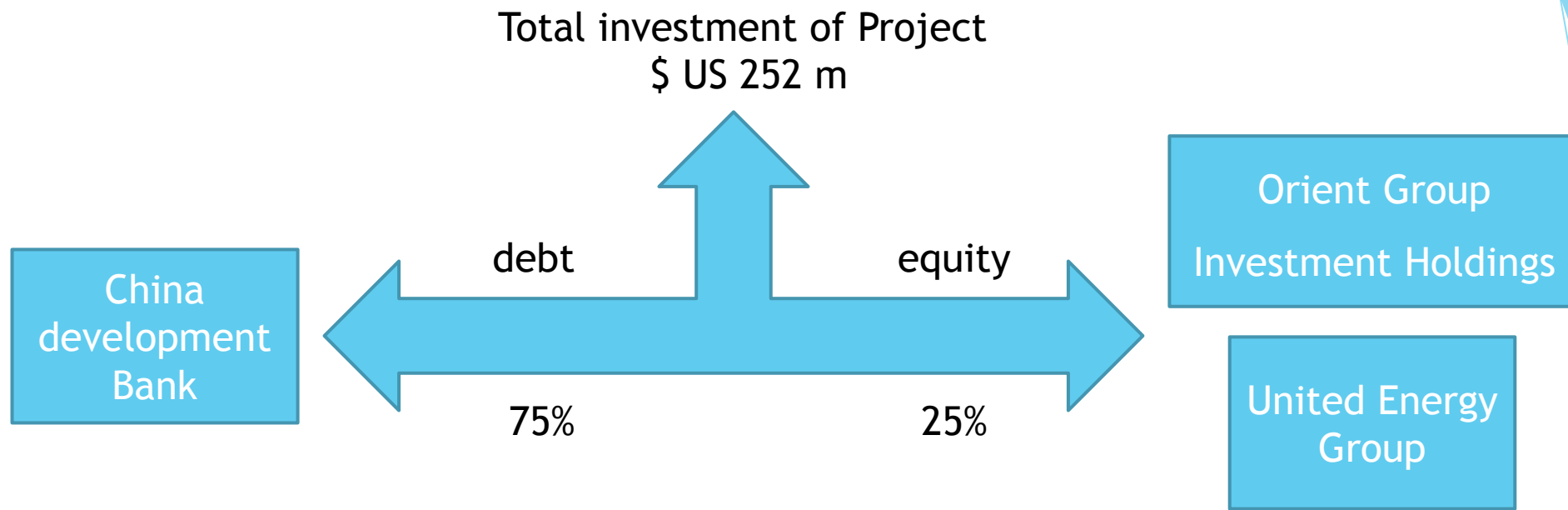
Contractors

China Gezhouba Group Company
Limited (CGGC)

Engineering, Procurement,
Construction

<https://pk.chineseembassy.org/eng/zbqx/P020181230760035767518.pdf>

<https://pk.chineseembassy.org/eng/zbqx/CPEC/t1627099.htm>



Capacity: 100 MW

Technology Wind Turbine

Unit installed June 2017

Sachal Wind Farm

Type

Wind

Location

Jhimpir, Thatta

Deadline

2020

Budget

\$ US 134 m



OWNERSHIP



Sachal Energy Development Pvt. Ltd.

Arif Habib Corporation Limited

holds 100% shares

Contractors

HydroChina International
Engineering Co., Ltd.

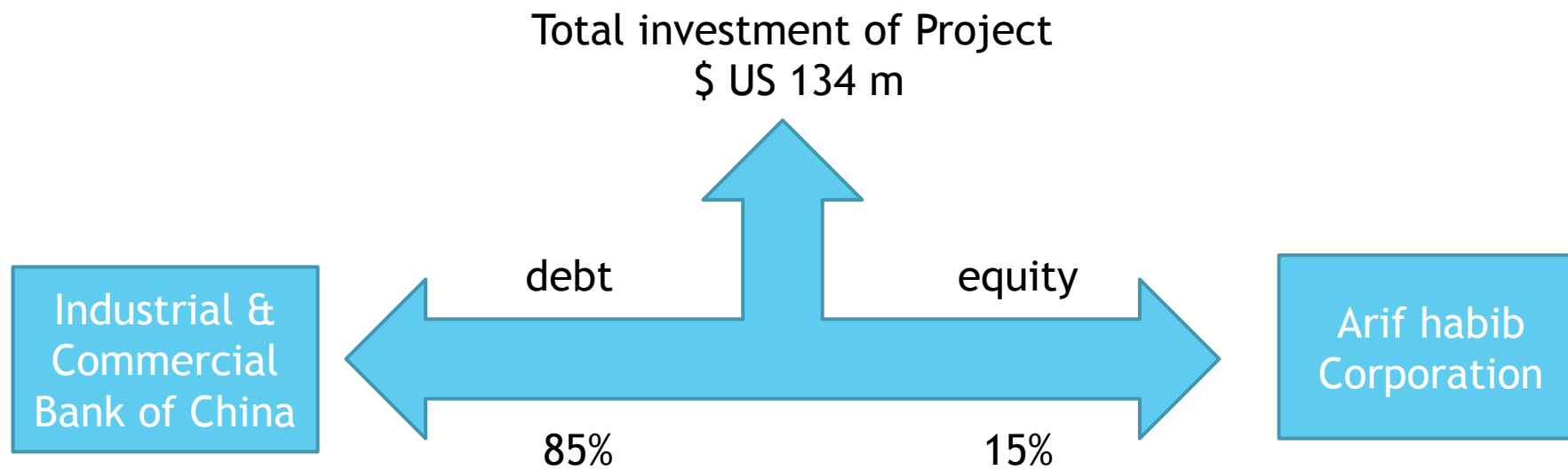
Engineering, Procurement,
Construction

Finance

Industrial and Commercial Bank of China

<https://pk.chineseembassy.org/eng/zbqx/P020181230760035767518.pdf>

<https://pk.chineseembassy.org/eng/zbqx/CPEC/t1627098.htm>



Capacity: 49.5 MW

Technology Wind Turbine

Unit installed June 2017

Three Gorges Second Wind Farm & Three Gorges Third Wind Farm

Type

Wind

Location

Jhimpir, Thatta

Deadline

2020

Budget

\$ US 224 m



Three Gorges Second Wind Farm & Three Gorges Third Wind Farm



China Three Gorges South Asia
Investment Ltd (CSAIL)

Shareholders

China Three Gorges International
Corporation (CTGI)

International Finance Corporation
(IFC)

Silk Road Fund

Finance

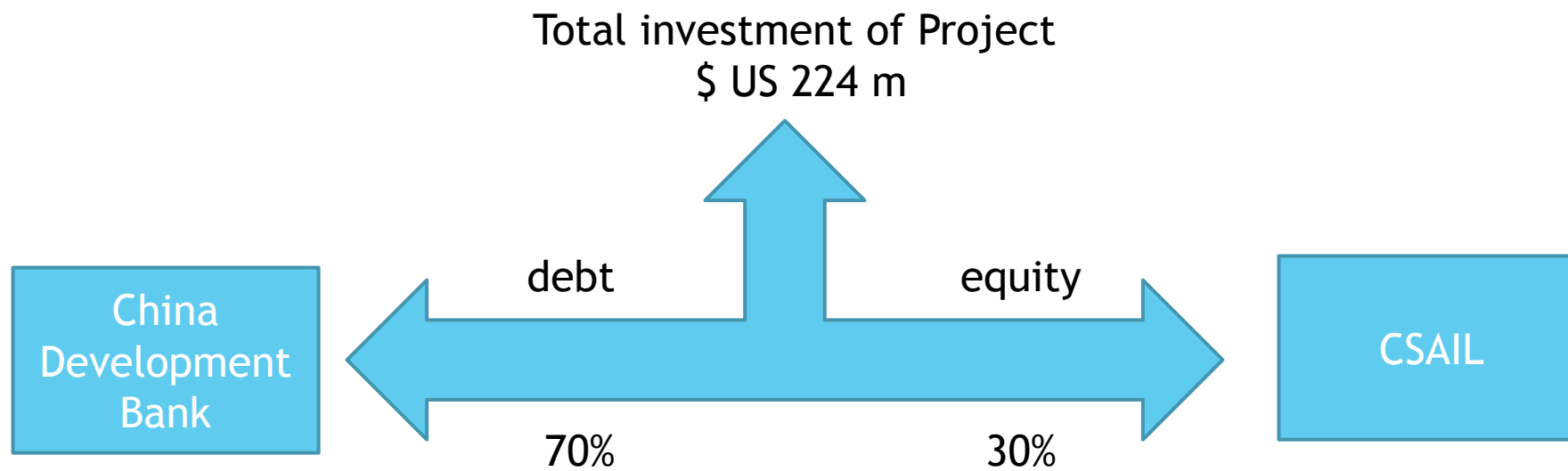
China Development Bank

Contractors

Shanghai Investigation Design &
Research Institute Co. Ltd.
/Sumec Group Corporation
Company Limited

Engineering, Procurement,
Construction

<https://pk.chineseembassy.org/eng/zbqx/P020181230760035767518.pdf>



Capacity: 100 MW

Technology Wind Turbine

Unit installed June 2018

Quaid e Azam Solar Park Bahawalpur

Type

Solar

Location

Bahawalpur, Punjab

Deadline

2020

Budget

~\$ US 1.3 b



Quaid e Azam Solar Park Bahawalpur

OWNERSHIP



Zonergy subsidiary of ZTE

ZTE Corporation is the most important shareholders

ZTE has 9 branch offices in Pakistan
more than 220 Chinese staff and over
620 locals It has cooperative relations
with 85 local subcontractors

Finance

China EXIM Bank

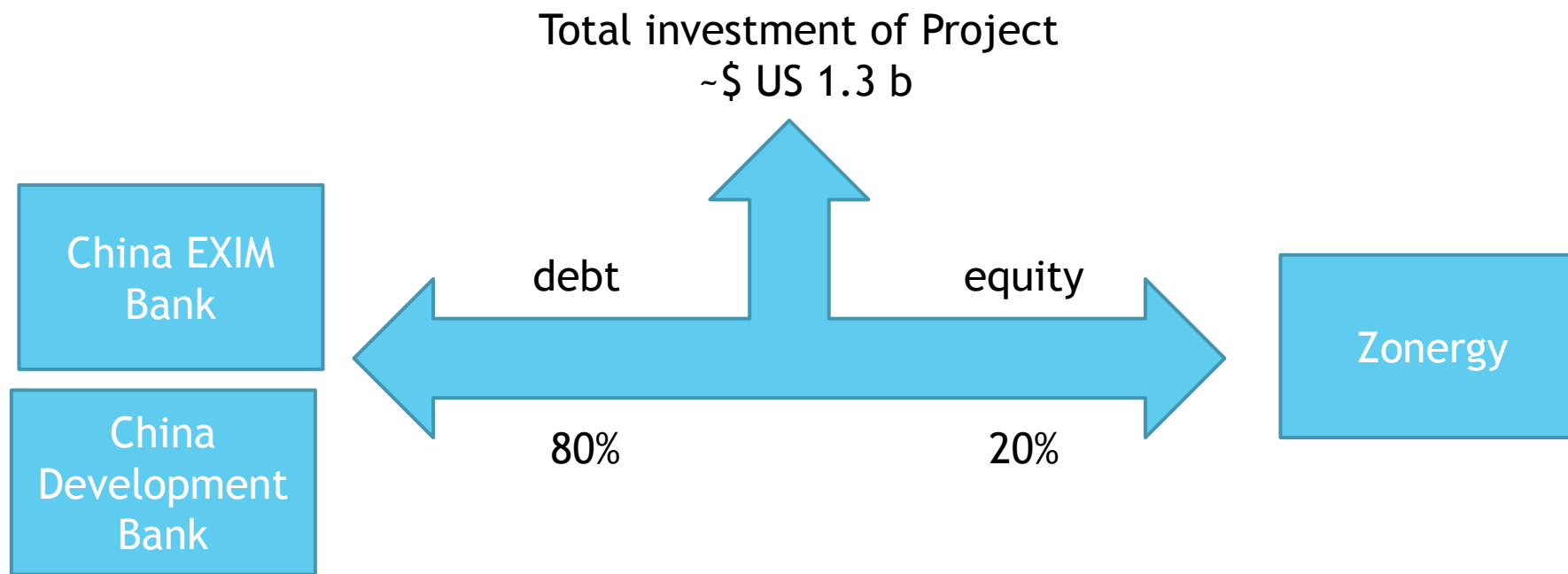
China Development Bank

Contractors

MCC

<https://pk.chineseembassy.org/eng/zbqx/P020181230760035767518.pdf>

<https://pk.chineseembassy.org/eng/zbqx/CPEC/t1627101.htm>



Capacity: 300 MW

Technology PV Solar

Unit installed June 2018

List of Total Connectivity Projects

Highway Network

No.	Project Name	Location	Status	Deadline
1	KKH Phase II (Thakot -Havelian Section)	Thakot -Havelian	Implementation Phase	2020
2	Peshawar-Karachi Motorway (Multan-Sukkur Section)	Multan-Sukkur	Ongoing	2020
3	Khuzdar-Basima Road N-30 (110 km)	Balochistan	Ongoing	n.d.
4	Upgradation of D.I.Khan (Yarik) - Zhob, N-50 Phase-I (210 km)	Khyber Pakhtunkhwa - Balochistan	Ongoing	n.d.
5	KKH Thakot-Raikot N35 remaining portion (136 Km)	Khyber Pakhtunkhwa	Ongoing	n.d.

Railway Network

No.	Project Name	Location	Status	Deadline
6	Expansion and reconstruction of existing Line ML-1	Karachi to Peshawar	In Process	2025
7	Havelian Dry port (450 M. Twenty-Foot Equivalent Units)	Havellian, District Haripur, KPK	Feasibility Completed	n.d.
8	Capacity Development of Pakistan Railways	Pakistan	Focus groups be established	n.d.

ICT

No.	Project Name	Location	Status	Deadline
9	Cross Border Optical Fiber Cable	Gilgit Baltistan, Khyber Pakhtunkhwa, Punjab	Operational	2020
10	Pilot Project of Digital Terrestrial Multimedia Broadcast (DTMB)	Gilgit Baltistan, Khyber Pakhtunkhwa, Punjab	Operational	2020
11	Early Warning System (EWS), Pakistan Meteorological Department	Pakistan	Unapproved	n.d.

(3)

Connectivity Complete Projects

\$ US 1354 m

\$ US 1315 m

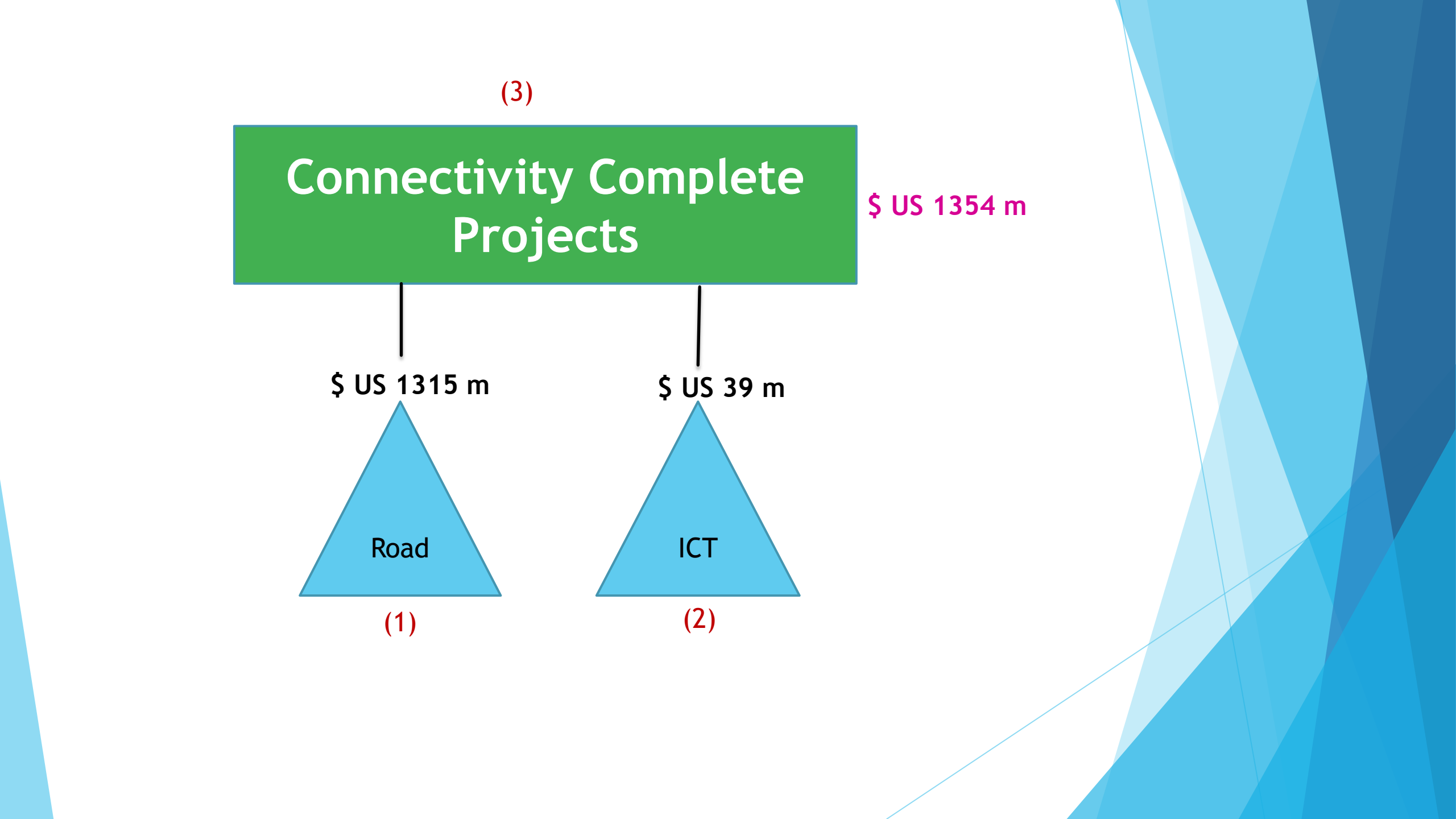
Road

(1)

\$ US 39 m

ICT

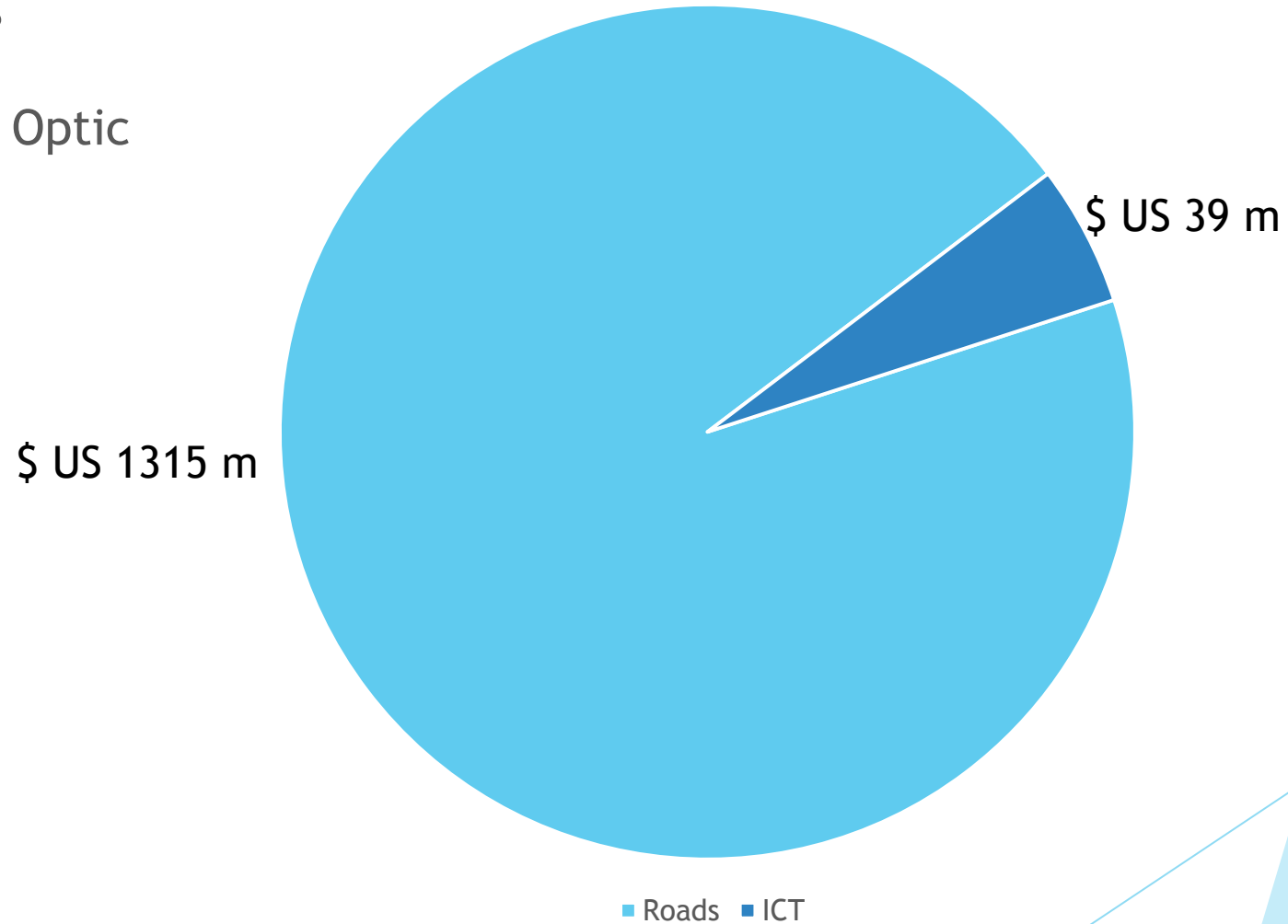
(2)



Total Budget for roads
\$5.9bn

Total Budget for Fibre Optic
\$44m

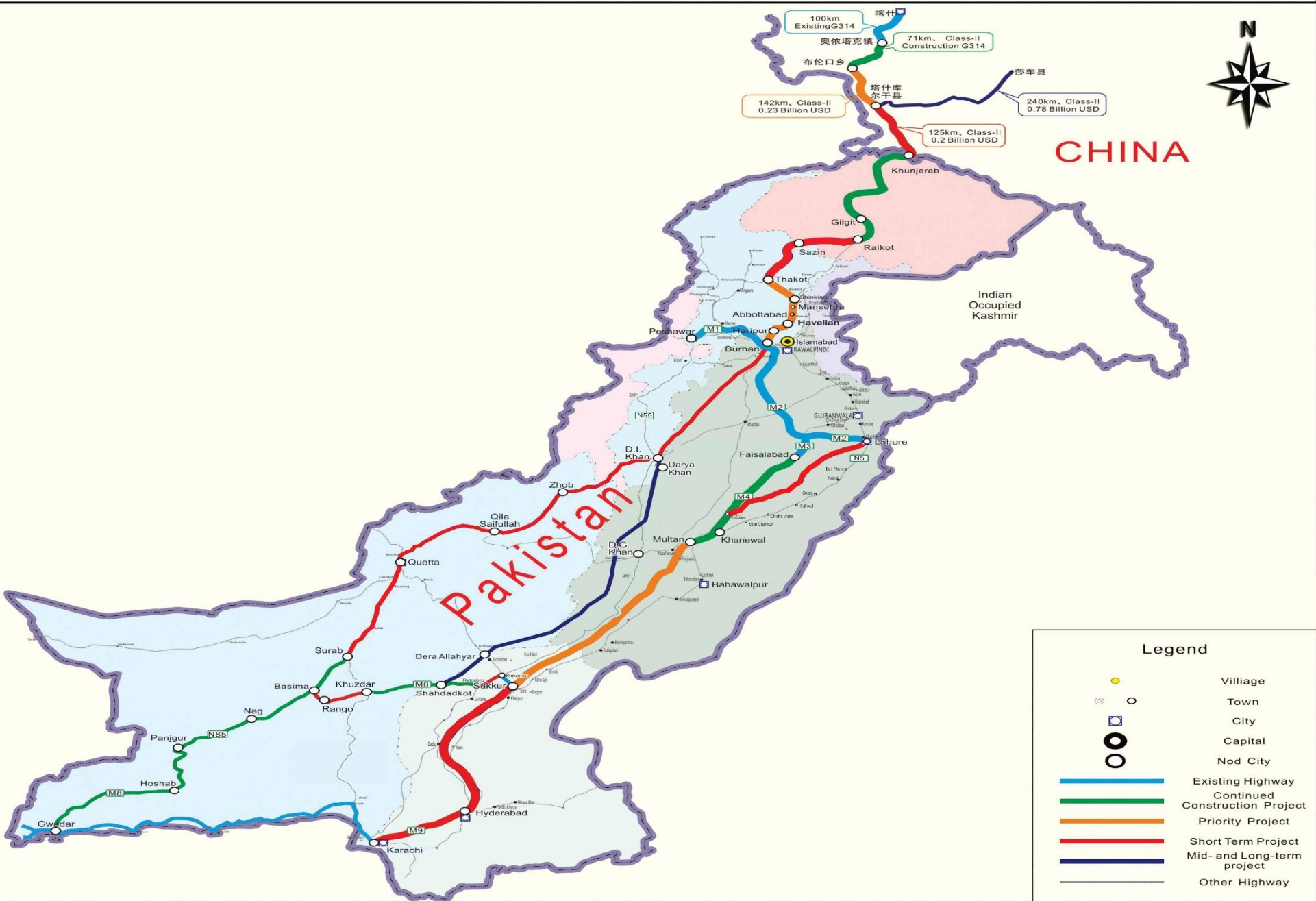
Total Cost of Completed Projects ~\$ US 1.3 b



Operational Projects- Connectivity

Sr. No.	Project Name	Type	Location	Funding(\$ US m)	Executing Company	Sponsor
1	KKH Phase II (Thakot-Havelian Section)	Road	Khyber Pakhtunkhwa	1315	Government Concessional Loan	CCCC Ltd.
2	Cross Border Optical Fibre Cable	ICT	Gilgit Baltistan	37		
3	Pilot Project of DTMB	ICT	Gilgit Baltistan	2		

Highways Network of CPEC



KKH Phase II (Thakot-Havelian Section)

Type

Road

Location

Khyber
Pakhtunkhwa

Deadline

2020

Budget

~\$ US 1.3 b





OWNERSHIP

China Communications Construction Company, Ltd. (CCCC)

Publicly traded engineering and construction company

Financial Closure

China EXIM Bank

Contractors

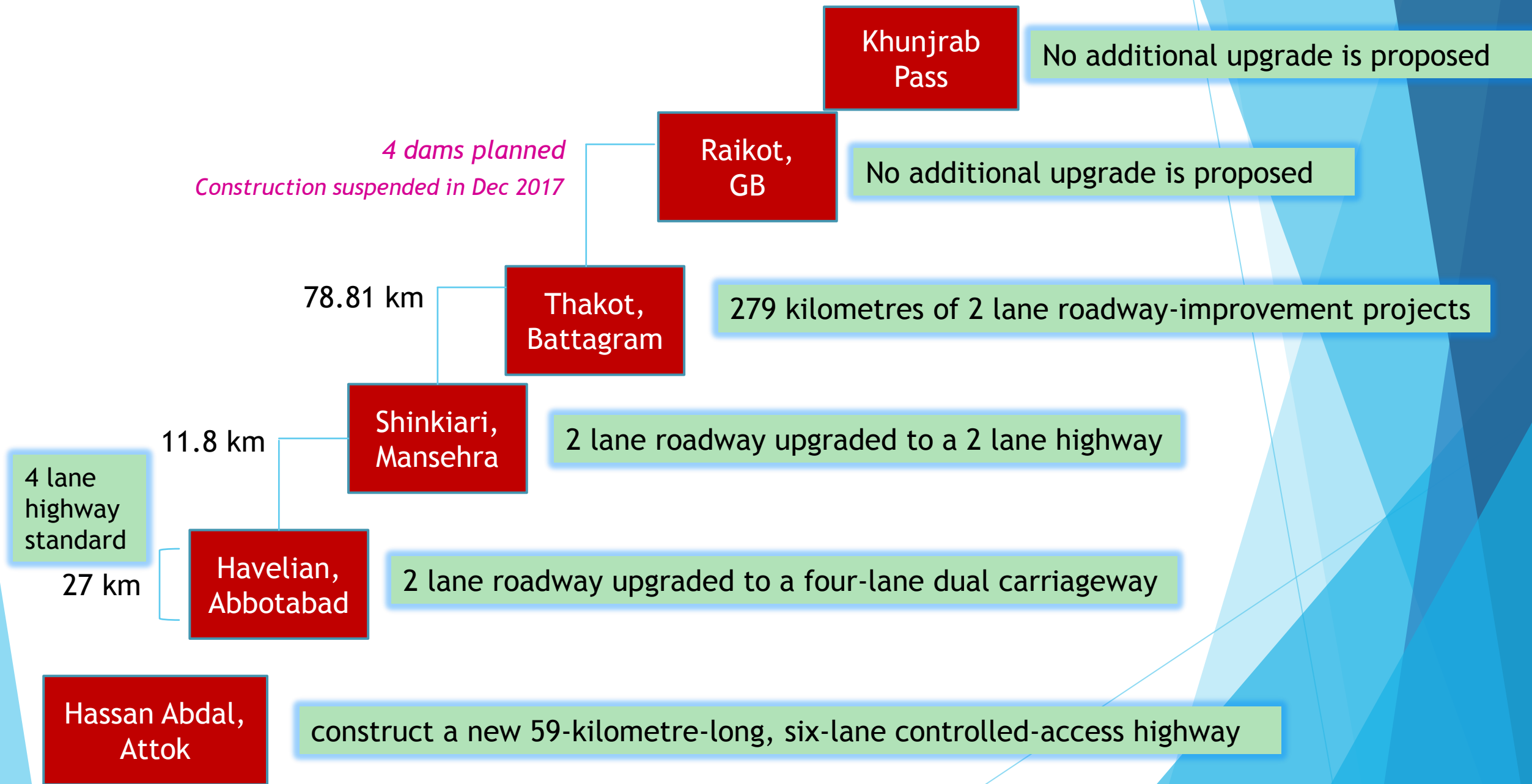
China Road and Bridge Corporation (CRBC)

China Communications Construction Company Ltd

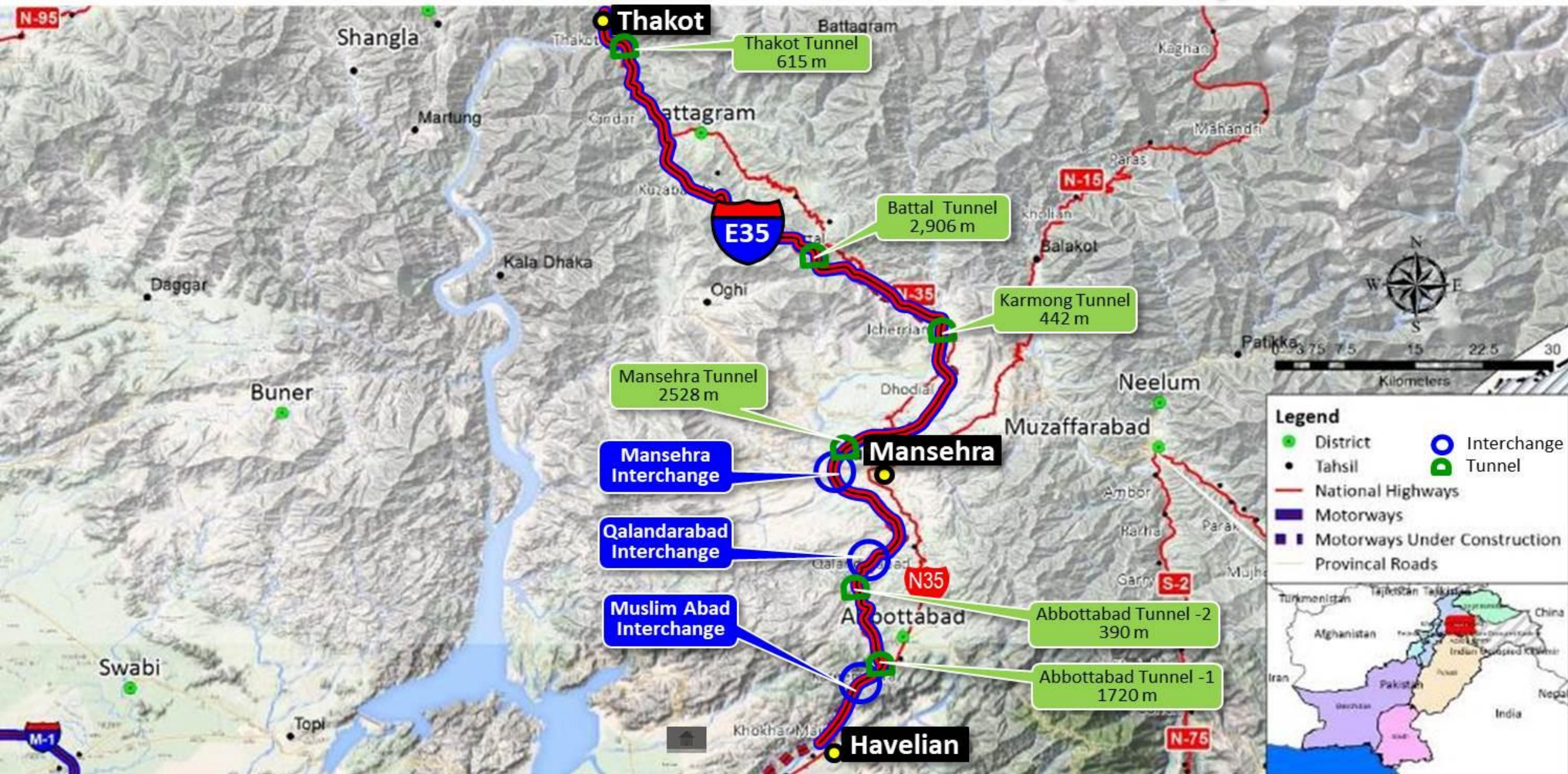
<https://pk.chineseembassy.org/eng/zbgx/P020181230760035767518.pdf>

<https://pk.chineseembassy.org/eng/zbgx/CPEC/t1627116.htm>

- ▶ The planned upgrades to the 470-kilometre-long (290 mi) section between Hasan Abdal and Raikot of the Karakoram Highway over the next many years is officially referred to in Pakistan as the Karakoram Highway Phase 2 project.
- ▶ started in September 2016, would be completed in March 2020
- ▶ divided into three sections for the smooth and speedy construction.
- ▶ first section is from Havelian to Abbottabad with 27 km length, the design speed is 100km/h two-way, 4-lane highway standard
- ▶ second stage is from Abbottabad to Mansehra with 11.88 km length, the design speed is 80 km/h two-way 4-lane expressway standard
- ▶ third section from Mansehra to Thakot is 78.81 km long and designed in two-lane with speed of 60 km/h
- ▶ The main structures included 60 large bridges, 45 middle and small bridges, 11 flyovers, 464 culverts, 40 underpasses, six tunnels (2 in Expressway section, four in Class-II Highway), three interchanges, 2 service areas, three tunnel management stations and six toll stations

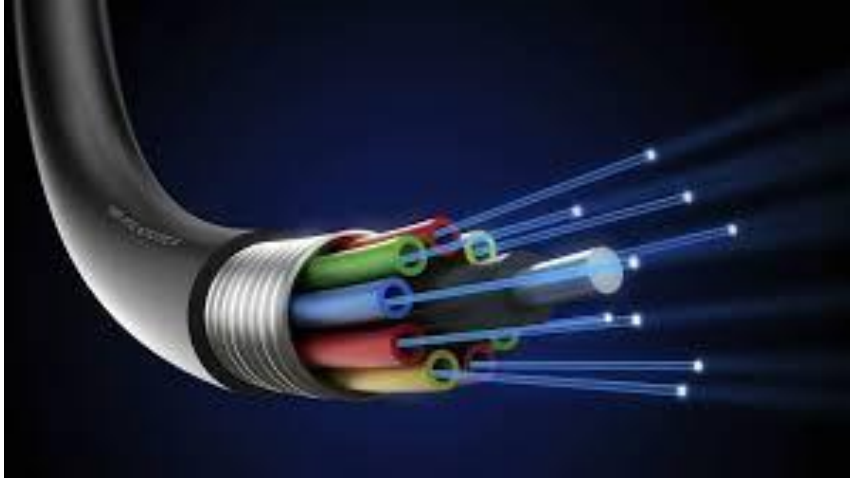


Havelian – Thakot Section (CPEC)



Project Details

Cross Border Optical Fibre Cable



Huawei Technology Co. Ltd.

Performance

- 3G and 4G connectivity to the Gilgit-Baltistan region
- to establish fast, reliable connectivity, communication that is not routed through Europe, the United States or India.
- improving internet penetration and increasing speed, especially in Balochistan and Gilgit-Baltistan.
- reduce the cost of internet connections.
- reduce Pakistan's dependence on undersea cables that carry the country's internet traffic

Financial Closure

Exim Bank of China at a concessionary interest rate of 2%

CPEC Fiber Optic Project (Khunjrab - Rawalpindi)

Federal Capital

• 18.204 Km 2.22%

Gilgit Baltistan

• 466.584 Km 56.7%

Khyber Pakhtunkhwa

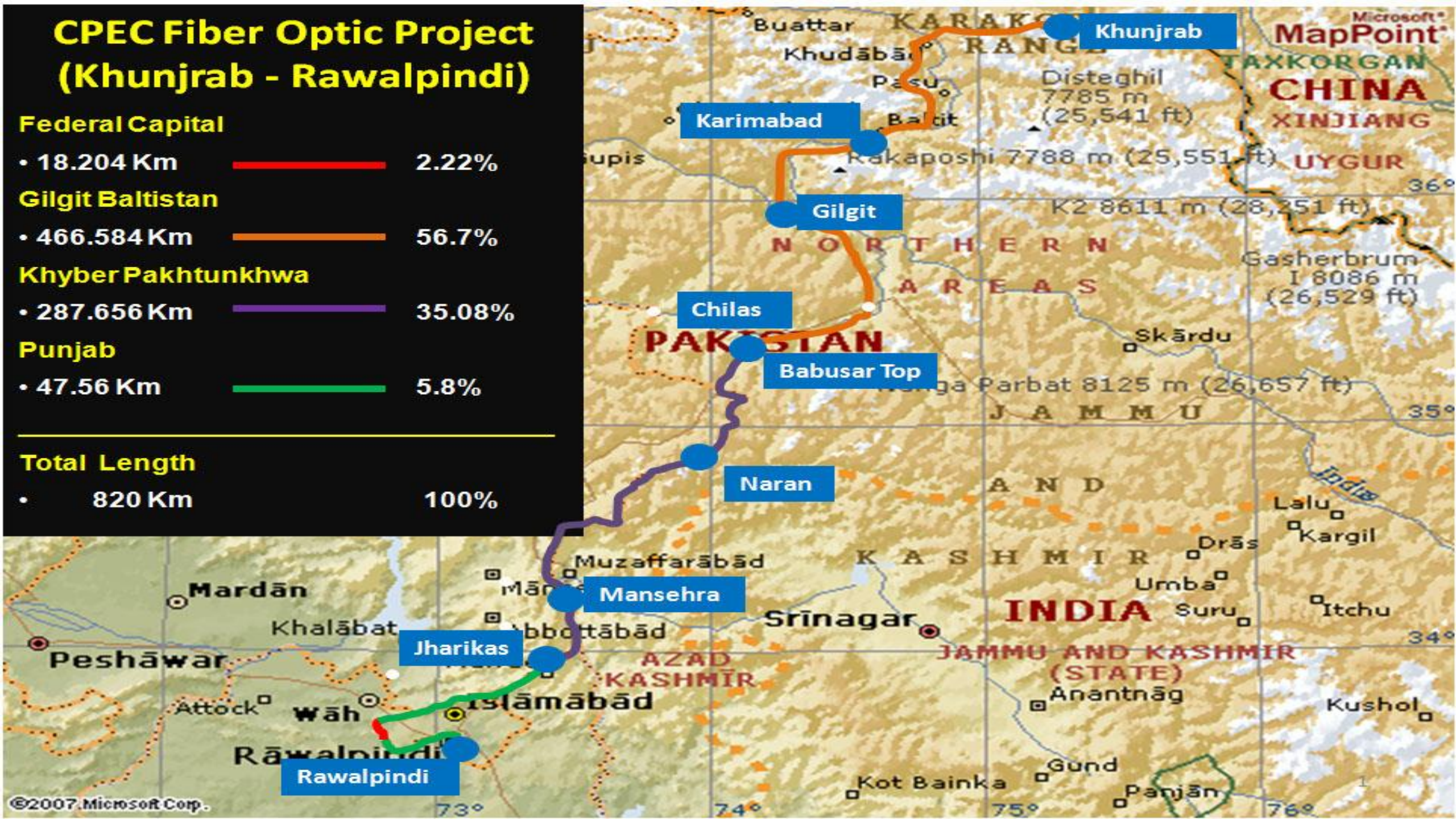
• 287.656 Km 35.08%

Punjab

• 47.56 Km 5.8%

Total Length

• 820 Km 100%

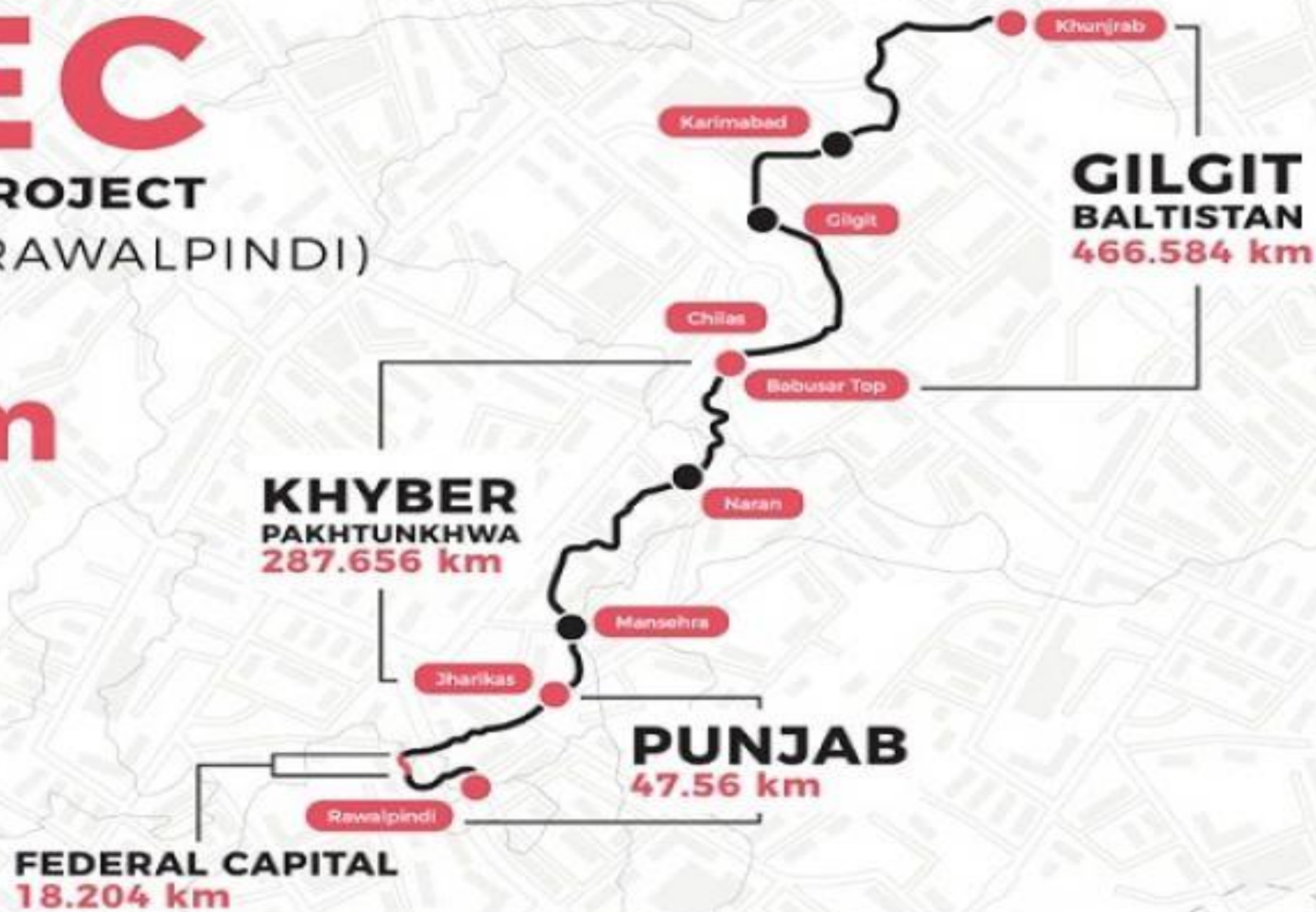


CPEC

FIBRE OPTIC PROJECT
(KHUNJERAB-RAWALPINDI)

TOTAL LENGTH

820 km



Project Details

Pilot Project of Digital Terrestrial Multimedia Broadcast
DTMB

Contractors

PTV and ZTE signed agreement to start pilot projects

Performance

- enable the switch to digital TV
- project is divided into four phases:
 - Phase I is Islamabad and surrounding areas
 - Phase II is Major cities e.g. Karachi, Lahore
 - Phase III is other densely populated cities
 - Phase IV is all Pakistan including remote areas

Project Completed

Demonstration project with Chinese side is being processed.

PC-1 of the Demonstration project approved by CDWP on 2nd May 2018.

Links

- <https://pk.chineseembassy.org/eng/zbqx/P020181230760035767518.pdf>
- <https://pk.chineseembassy.org/eng/zbqx/CPEC/t1627103.htm>
- www.cpec.gov.pk
- <http://aedb.org/88-highlights/95-m-s-hydro-china-dawood-power-pvt-limited-achieved-financial-close-for-50-mw-wind-power-project>
- <http://eng.sinohydro.com/index.php?m=content&c=index&a=lists&catid=9>
- <http://www.uegl.com.hk/en/aboutus>

Thank You