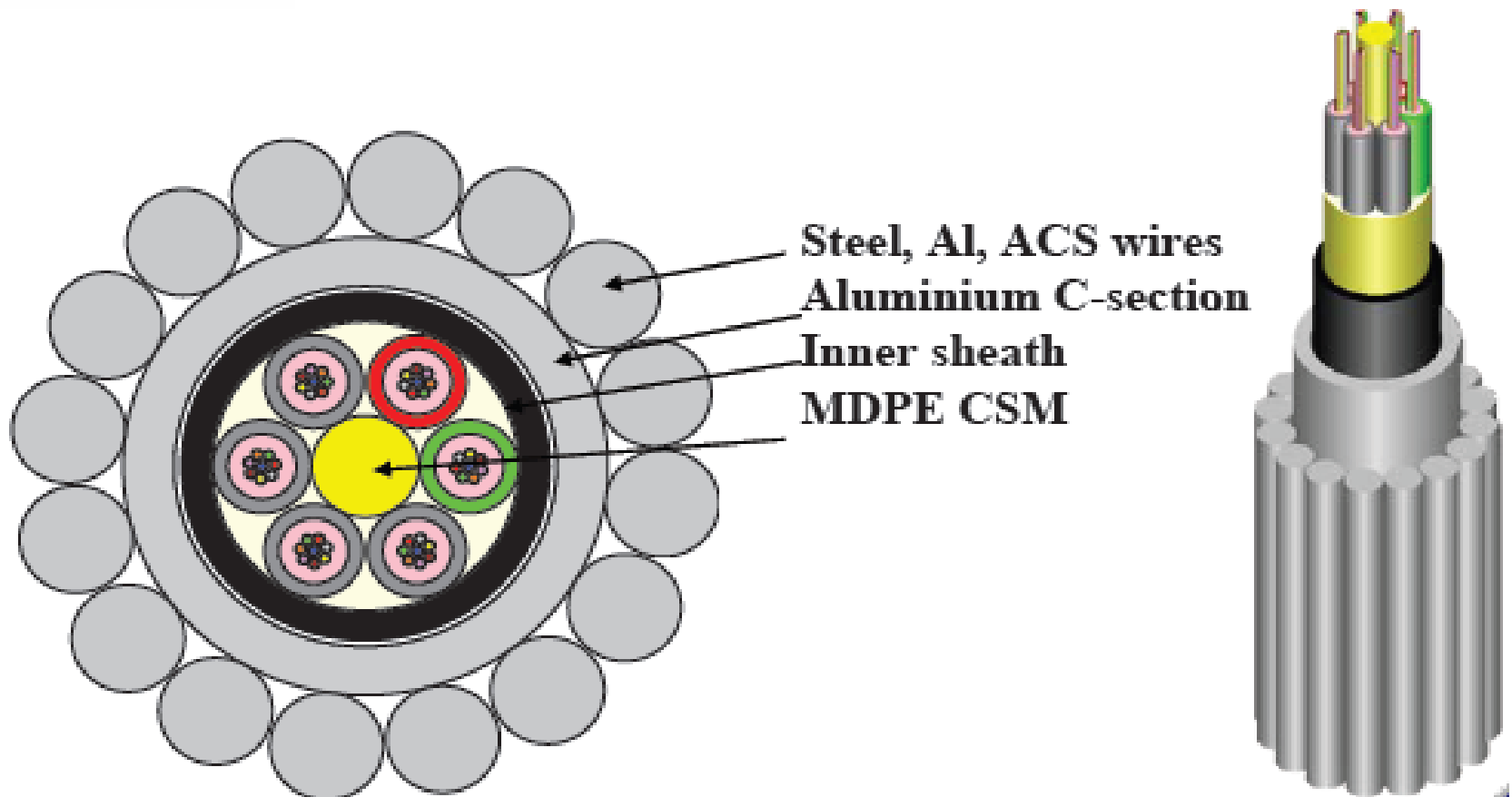


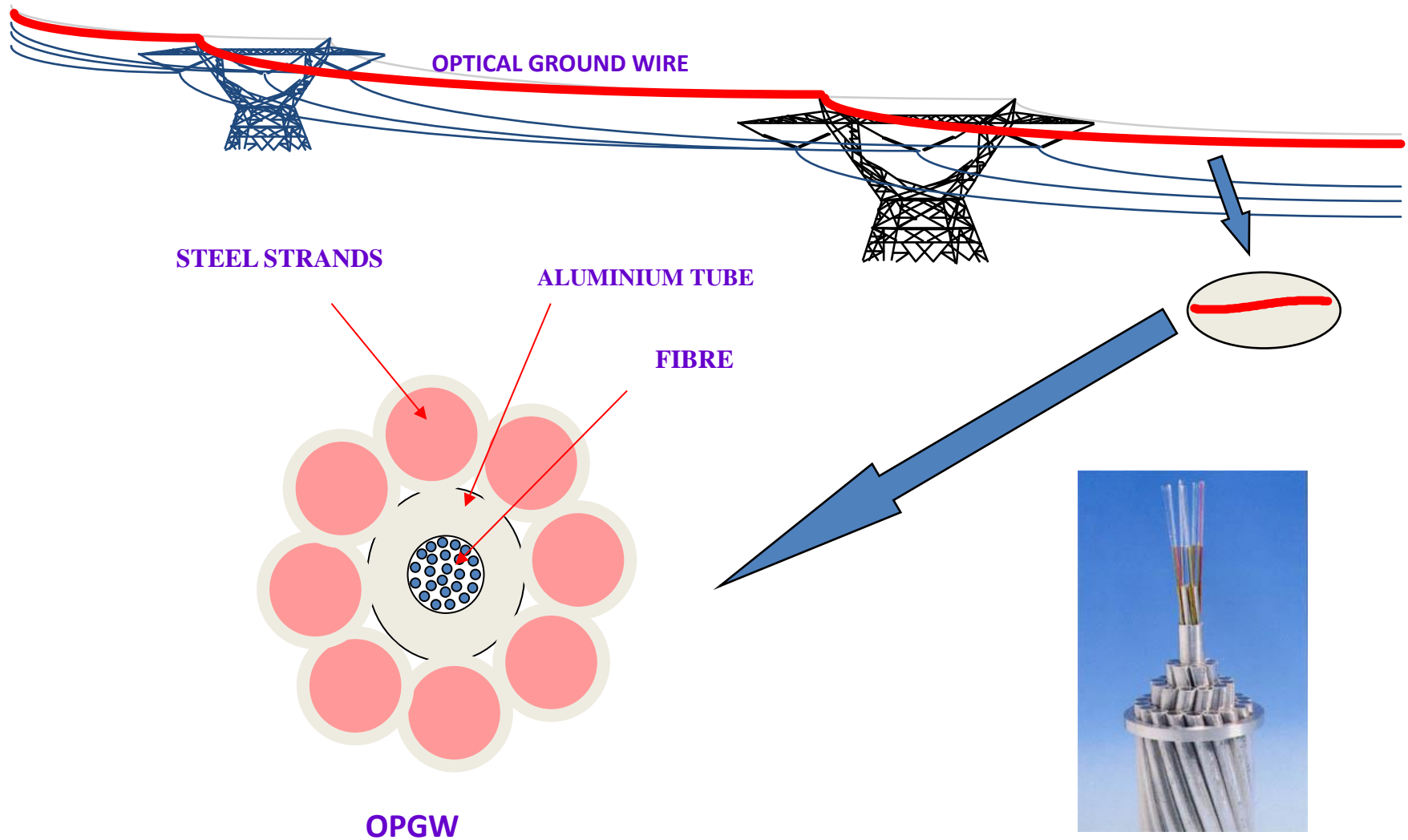
OPGW based Backbone in South Asia



Optical Ground Wire (OPGW)



Overhead Optical Cable Installation



Advantages of OPGW

- Suitable for Transmission lines. **Acts as earth wire–cum-OFC.**
- **Right of Way(ROW) readily available** on transmission lines
- **No forest Clearance** etc. are required
- Transmission infrastructure is **sturdy, stable, free from vandalism and rodent menace.**
- Telecom Network over Transmission system ensures **very high availability** for Telecom Network
- **Faster Roll-out. Mostly Live line installation** without disrupting power flow
- **Longer Life** of OPGW

J&K Flood – Sept 2014

PGCIL comes forward to help cellular operators

Disruption in telecom facilities hampering relief, rescue in many parts of Valley

Mohinder Verma

JAMMU, Sept 7: The disruption in the telecommunication facilities of almost all the service providers is hampering ongoing relief and rescue operation in many parts of Kashmir valley. Keeping in view the prevailing situation, the Power Grid Corporation of India Limited (PGCIL) has come forward to provide backbone support to the telecom operators by allowing use of its fibre-optic telecommunication cable network.

Reports said that telecommunication facilities of almost all the service providers including Bharat Sanchar Nigam Limited (BSNL) have suffered extensive damage due to floods in the Kashmir valley and cellular ser-

vices except of Aircel stopped working from this afternoon.

In the absence of proper communication facilities, the administration has started facing difficulties in ensuring coordination during the relief and rescue operations, which otherwise is very important to reach out the people in the inundated areas and rush them to the safer locations.

Notwithstanding the claims of the BSNL, the major telecommunication service provider in Jammu and Kashmir, people not only of the Kashmir valley but also of Jammu have been facing numerous difficulties in establishing their contacts with their near and dear ones trapped in the flooded areas due to damage to the telecommunication infrastructure.

EXCELSIOR has also been receiving numerous calls from the people in Jammu as well as in different parts of the country seeking latest information about the ongoing relief and rescue operations in Kashmir valley as they have been finding it difficult to establish telecommunication contact with their relatives in the Valley.

According to the reports, even Ministers have also been finding it difficult to maintain contact with the officers of their respective departments in Kashmir valley and relief and rescue teams because of disruption in the telecommunication network.

In the given situation, Power Grid Corporation of India Limited's fibre-optic telecommu-

(Contd on page 9 Col 4)

Disruption in telecom facilities hampering relief, rescue in many parts of Valley

nication cable network is the only hope for the cellular service providers to make their network functional. Even Aircel is functional only because of backbone support from the infrastructure of PGCIL.

These operators have the option of making use of Mobile Switching Centre of Aircel as fibre-optic telecommunication network of PGCIL is the reliable and dependable option available to them to make their network functional and contribute in the relief and rehabilitation measures by restoring communication link.

"Keeping in view the prevailing situation, PGCIL today hinted that it is ready to provide backbone support to any of the cellular service provider interested in making use of Aircel's Mobile Switching Centre", sources said, adding on the receipt of information in

this regard four cellular service providers-Vodafone, Airtel, Reliance and Idea approached Aircel for making use of its Mobile Switching Centre.

"In order to facilitate these four private service providers PGCIL has even made available enhanced bandwidth to the Mobile Switching Centre of Aircel", they said. The service providers would be able to restore their network only after Aircel completes configuration, which was going on when reports last came in. Even business terms and conditions were being finalized between Aircel and four other private service providers.

Power Grid Corporation of India Limited runs tele telecommunication infrastructure business through overhead fibre-optic telecommunication cable network using ground wire (OPGW)

on its power transmission lines. In Jammu and Kashmir, Kishepur-Wagoora transmission line of PGCIL carries optical fibre and from Wagoora it reaches various customers in the Valley.

This transmission line crisscrossing the snow-capped mountains provides an excellent infrastructure for stringing optical fibre cable, which is being used to set up a high-grade long distance telecommunication network of high capacity.

Since the optical fibre network on the PGCIL transmission line is sturdy and secure, rodent menace free and vandalism proof, it is dependable source of communication. It is pertinent to mention here that PGCIL has diversified into telecom utilizing right of way on its extra high voltage power transmission network infrastructure.

BSNL experts, equipment being airlifted to Srinagar today

**Pvt operators fail to make use of PGCIL OPGW*

Mohinder Verma

JAMMU, Sept 8: As the damaged telecommunication infrastructure continues to hamper relief and rescue operation in Kashmir valley, Union Government has directed the Bharat Sanchar Nigam Limited (BSNL) to gear up the efforts to restore the telecommunication link of the Valley at the earliest for which men and machinery are being airlifted to Srinagar from different parts of country tomorrow.

Highly placed sources told EXCELSIOR that as lack of telecommunication link is hampering relief and rescue operation in Kashmir valley and posing threat to the lives of lakhs of people trapped in the flooded areas, Union Government today directed higher authorities of the BSNL to take whatever step they want to so as to ensure early restoration of telecommunication link.

The Union Government even passed instructions for air-

lifting of required equipment in the Indian Air Force (IAF) choppers from different parts of the country to Srinagar for making as many as possible Base Transceiver Stations of the BSNL functional within shortest possible time. "The authorities of the BSNL have further been directed to lay focus on Srinagar where almost all the localities are flooded", sources said.

Following the directions from the Union Government, BSNL is rushing experts on satellite-based services from

BSNL experts, equipment being airlifted to Srinagar today

BSNL has also been trapped in different localities and they are not in a position to assist the experts.

Similarly, a team of BSNL engineers led by General Manager Mobile is leaving for Srinagar from Jammu in the Indian Air Force (IAF) chopper along with the necessary equipment to start cellular service restoration operation in Kashmir valley.

"There are standing instructions for the BSNL to airlift manpower or equipment from any part of the country to restore communication link and local BSNL authorities are also exploring the possibility of airlifting some material and staff from Leh also", sources said.

When contacted, Chief General Manager of BSNL, R N Sudhakar confirmed that teams and equipment from different parts of country are being airlifted to Srinagar for restoration of telecommunication network.

"Our battery and power plants

would be made functional within next one or two days.

According to the sources, it was due to flooding of battery and power plants that BSNL could not make use of fibre-optic telecommunication cable network of Power Grid Corporation of India Limited.

What to talk of BSNL even private cellular operators failed to avail the benefit of PGCIL OPGW because of varied reasons including some business terms and conditions with the Aircel, whose Mobile Switching Centre is reportedly functional in Srinagar. "In such a grim situation, monetary losses should not be the concern of any of the cellular service provider as nothing is important that the lives of lakhs of people", sources said.

Meanwhile, a spokesman of Airtel said that unprecedented flood situation has resulted in major damage to the infrastructure and severely impacted its telecom networks.

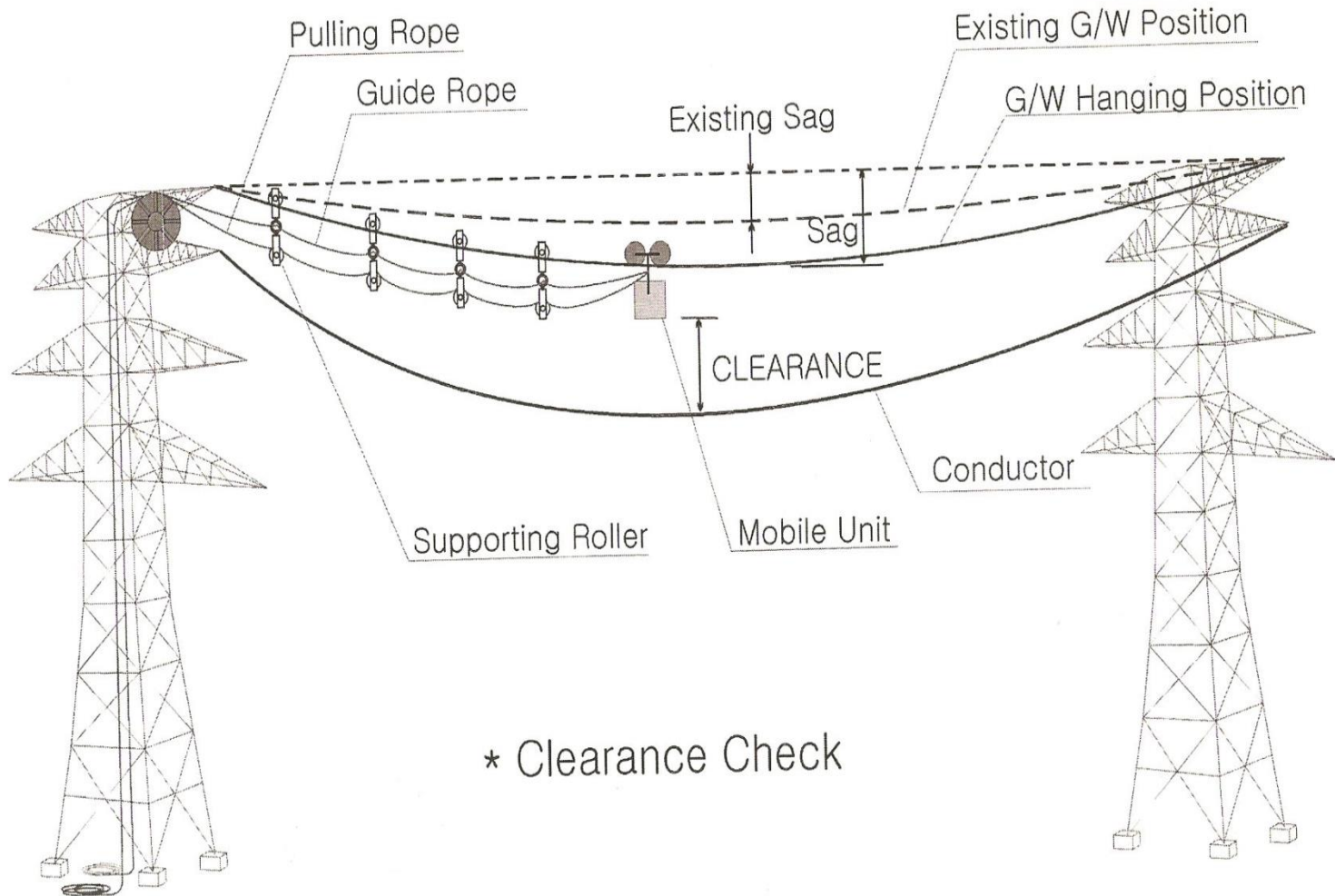


OPGW Stringing

- On New Planned Transmission Lines
 - By Off-line stringing during transmission line conductors stringing
- On Existing Transmission Lines
 - By Off-line stringing after taking shutdowns of the lines
 - By Live-line stringing without interruption of power transfer through the line
- Most of the Overhead Fibre Optic Cables in POWERGRID have been installed in existing lines through Live-line stringing



Live Line Stringing



* Clearance Check

POWERGRID – An Overview

A 'NAVRATNA'
ENTERPRISE

CENTRAL
TRANSMISSION
UTILITY

LISTED
COMPANY
since 2007

PAYING DIVIDEND
SINCE 1993-94

CONSISTENTLY RATED
'EXCELLENT' BY GoI

GOVT.
SHAREHOLDING
57.90%

VISION

World Class, Integrated, Global Transmission Company with Dominant Leadership in Emerging Power Markets ensuring Reliability, Safety and Economy

Existing
Businesses

Transmission

Consultancy

Telecom

International
Business

New Business
Opportunities

Desert Power
India

Distribution
(Wire
Business)

Smart Grid
Smart City

Green Energy
Corridors

Energy
Efficiency

Credit Ratings

• AAA
• Stable

CRISIL

ICRA

• AAA
• Stable

• AAA

CARE

Domestic

Internat
ional

• BBB (-)
• Stable Outlook

S&P

Fitch

• BBB (-)
• Stable Outlook

Transmission Lines

139,708 ckm

Inter Regional capacity 75,050 MW

MVA & S/S

2,92,543 MVA

219 Nos.

Operating Parameters

Availability: > 99.79%

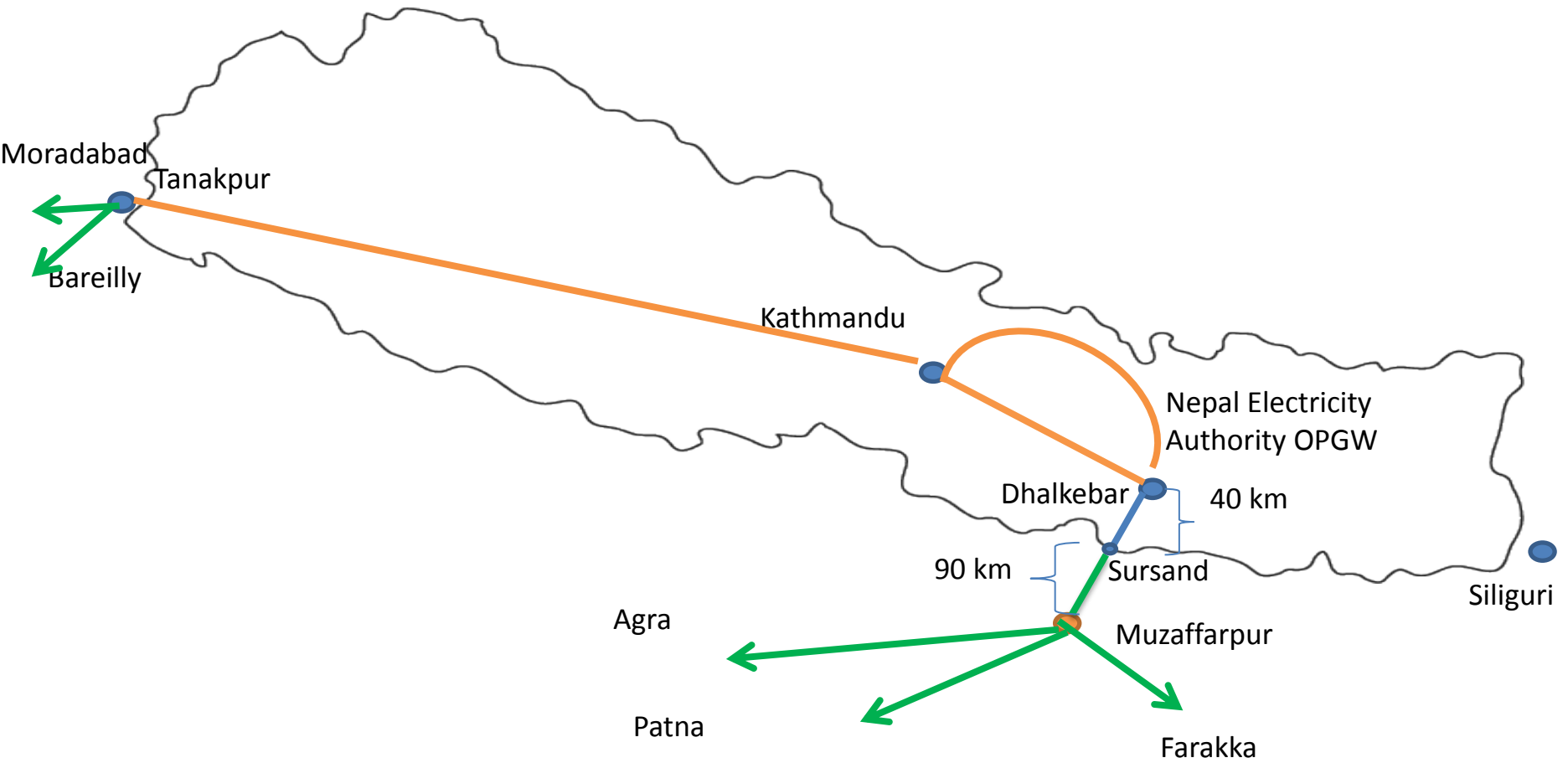
Reliability: 0.68 trippings/ line

OPGW in India

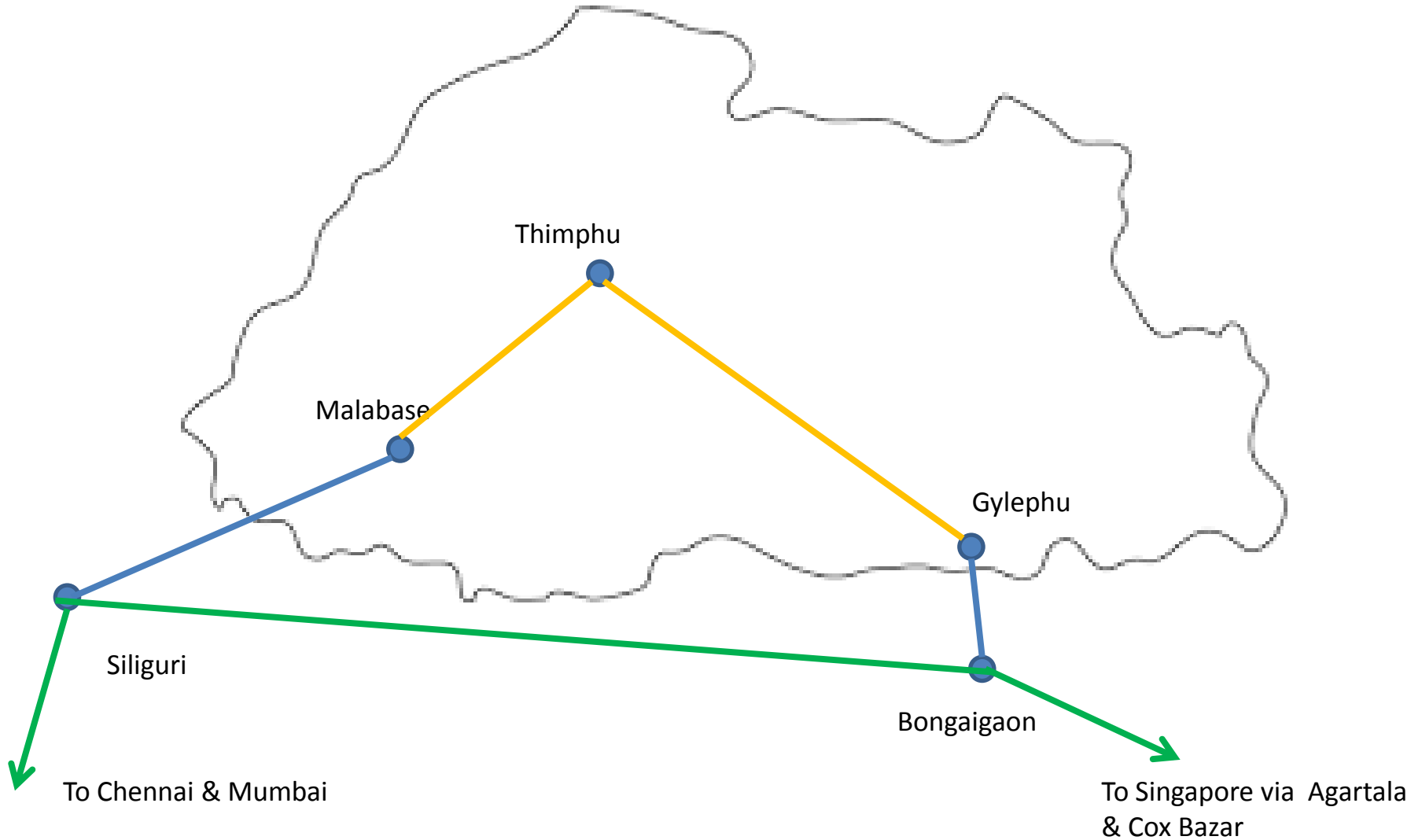


- POWERGRID has 30,000 km of OPGW in commercial operations
- India has 1,00,000+ km of 132 kV and above lines that are suitable for laying OPGW
- A DPR for the above has been submitted to Ministry of Power

Nepal – India OPGW link



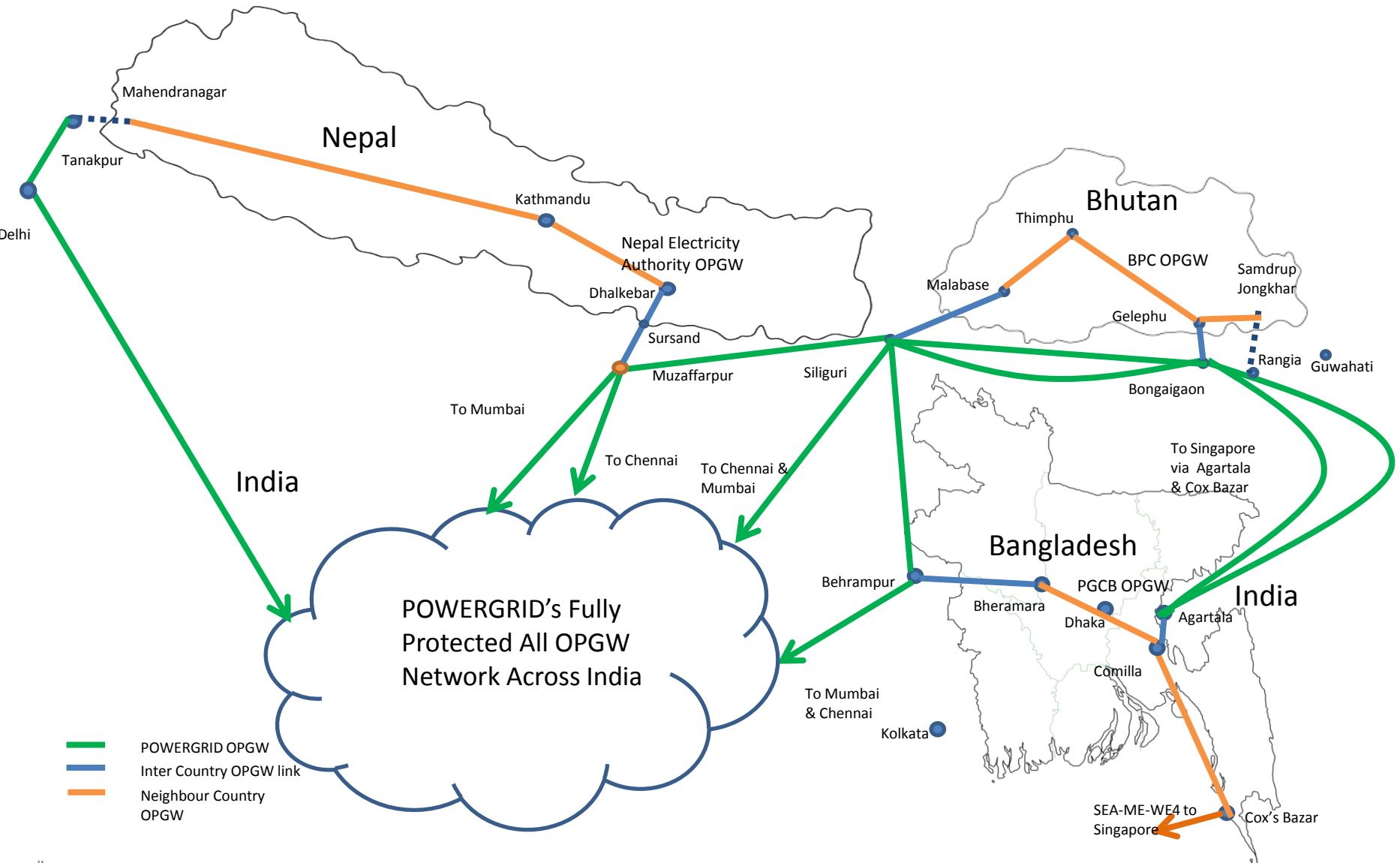
Bhutan Connectivity



Bangladesh Connectivity



OPGW Availability in South Asia



Harnessing OPGW

- Reliable: Freedom from Fiber Cuts due to Road Widening, Cyclone, Flood etc.
- Protected route to Landlocked Countries
- Seamless: Electricity Utilities of Bangladesh, Bhutan, India & Nepal connected by OPGW
- Alternate Routes to Singapore for Bhutan & Nepal
- Shorter land route to Mumbai for Bangladesh compared to SEA-ME-WE-4
- Shorter route between Kolkata & Agartala through Bangladesh to benefit NE India

A low-angle photograph of a power line tower against a starry night sky. The tower is a lattice structure, and power lines extend from it towards the top corners of the frame. The sky is filled with stars, and the Milky Way galaxy is visible as a bright, colorful band of light stretching across the background. The colors of the Milky Way range from blue and purple to red and orange.

Thank You