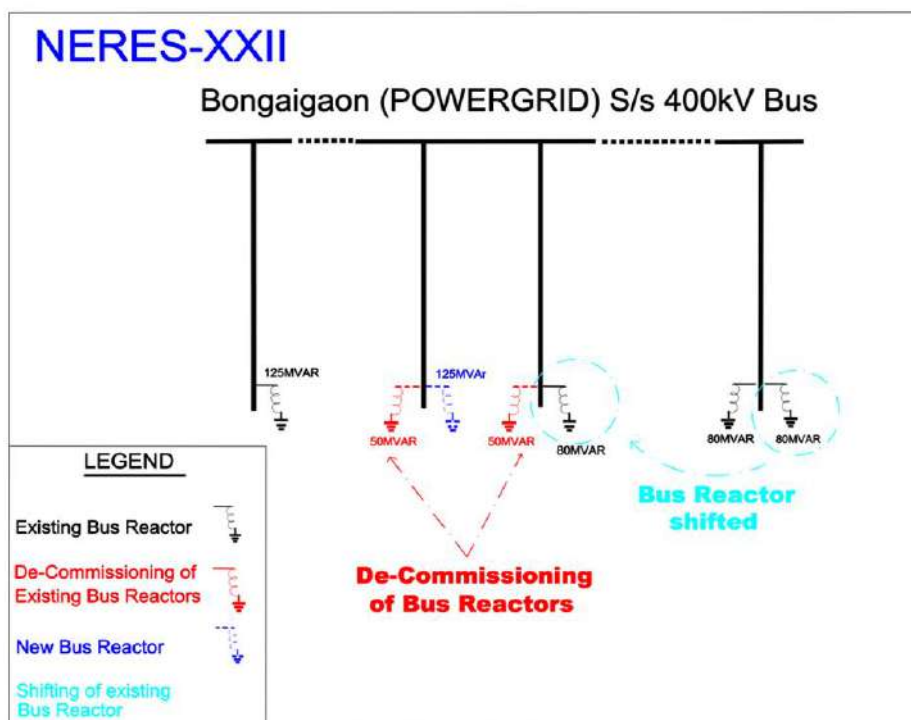


Sl. No.	Scope of the Transmission Scheme	Capacity/ km
	2x50MVAR bus reactors at Bongaigaon (POWERGRID) S/s without any modification/ upgradation in the existing bus reactor bay equipment.	
3.	<p>One of the existing 2x80MVAR bus reactors (presently installed in parallel in same bay) may be installed at Bongaigaon (POWERGRID) S/s in other vacated bay after decommissioning of above mentioned 420kV, 2x50MVAR bus reactors.</p> <p><i>Note: One of the existing 2x80MVAR bus reactor would be installed in other 400kV bay (2nd bay) vacated after decommissioning of existing 420kV, 2x50MVAR bus reactors at Bongaigaon (POWERGRID) S/s without any modification/ upgradation in the existing bus reactor bay equipment.</i></p>	-

Implementation time-frame: 18 months from allocation



(b) NERES-XXV (Bornagar)

In the 5th meeting of erstwhile Standing Committee on Power System Planning of NER, it was agreed that there is a need for 2nd 400kV AC node in NER for interconnection with national grid to address the case of any eventuality at Bongaigaon S/s. The same was taken into account, while planning new interconnection between India and Bangladesh viz. Bornagar (Assam, NER) – Parbotipur (Bangladesh) – Katihar (Bihar, ER) 765kV D/c line. Both the schemes viz. High

Capacity India-Bangladesh AC Corridor and formation of second 400kV node in NER-ER corridor were deliberated in the 6th meeting of erstwhile Standing Committee on Power System Planning of NER held on 03-10-2016. In 2nd NERPC-TP it was recorded that “NERLDC expressed that another 400kV entry point of Bornagar in North Eastern states will be crucial and helpful in system operation.”.

Ministry of Power, Govt. of India vide letter dated 31-12-2020 had assigned implementation of the entire KPB link (Indian and Bangladesh portions) to POWERGRID under Regulated Tariff Mechanism (RTM) with completion schedule as Dec 2022. NER portion of the interconnection has been delinked linked with the Bangladesh interconnection to meet the requirement of Grid operator.

AEGCL has planned new 220/132kV substation at Bornagar is expected to be implemented in the next 3-4 years i.e. by 2028-29. It was opined by all stakeholders that Bornagar (AEGCL) is yet to be taken up and finalisation of funding and implementation thereafter could mean that substation would be available in next 4-5 years only, however, implementation of Bornagar S/s for reliability is a long pending matter, which was agreed in the 5th meeting of erstwhile Standing Committee on Power System Planning of NER held on 08-08-2015 wherein it was agreed that there is a need for 2nd 400kV AC node in NER for interconnection with national grid to address the case of any eventuality at Bongaigaon S/s. Accordingly, it was decided that in first phase, Bornagar S/s may be implemented in ISTS as 400kV switching station with space provision for 400kV switchyard along with 400/220kV ICTs; and the 400/220kV ICTs can be installed subsequently as when implementation modalities and timeline for implementation of Bornagar (AEGCL) S/s is finalised. It was decided that AEGCL would regularly update status of Bornagar (AEGCL) 220/132kV S/s in CMETS-NER and at suitable time installation of ICTs at Bornagar (ISTS) S/s can be planned.

Keeping in view RoW issues near Bongaigaon S/s, it is better to keep unutilised line portion anti-theft charged so as to utilise the same for termination of new 400kV line in the future, and there would be no impact on the tariff to be recovered by M/s ENICL for their line including the proposed unutilized line section. Further, tariff of line bays of POWERGRID at Bongaigaon end should also not be affected.

The scheme was agreed in the 26th CMETS-NER held on 27-12-2023.

Sl. No.	Scope of the Transmission Scheme	Capacity/ km
1.	<p>Establishment of new 400kV Bornagar (ISTS) switching station in Assam (765kV and 220kV levels to be established in future)</p> <p>Additional space for future expansion:</p> <p>6x1500MVA, 765/400kV ICTs (19x500MVA single phase including one spare unit) along with associated ICT bays at both voltage levels</p> <p>5x500MVA, 400/220kV ICTs along with associated ICT bays at both voltage levels</p>	<ul style="list-style-type: none"> • 420kV, 1x125MVAr Bus Reactor: 2 no. • 400kV bus reactor bays: 2 no. • 400kV line bays: <ul style="list-style-type: none"> i) 2 no. with provision for installation of 1x80MVAr switchable line reactor [for termination of Alipurduar (POWERGRID) – Bornagar

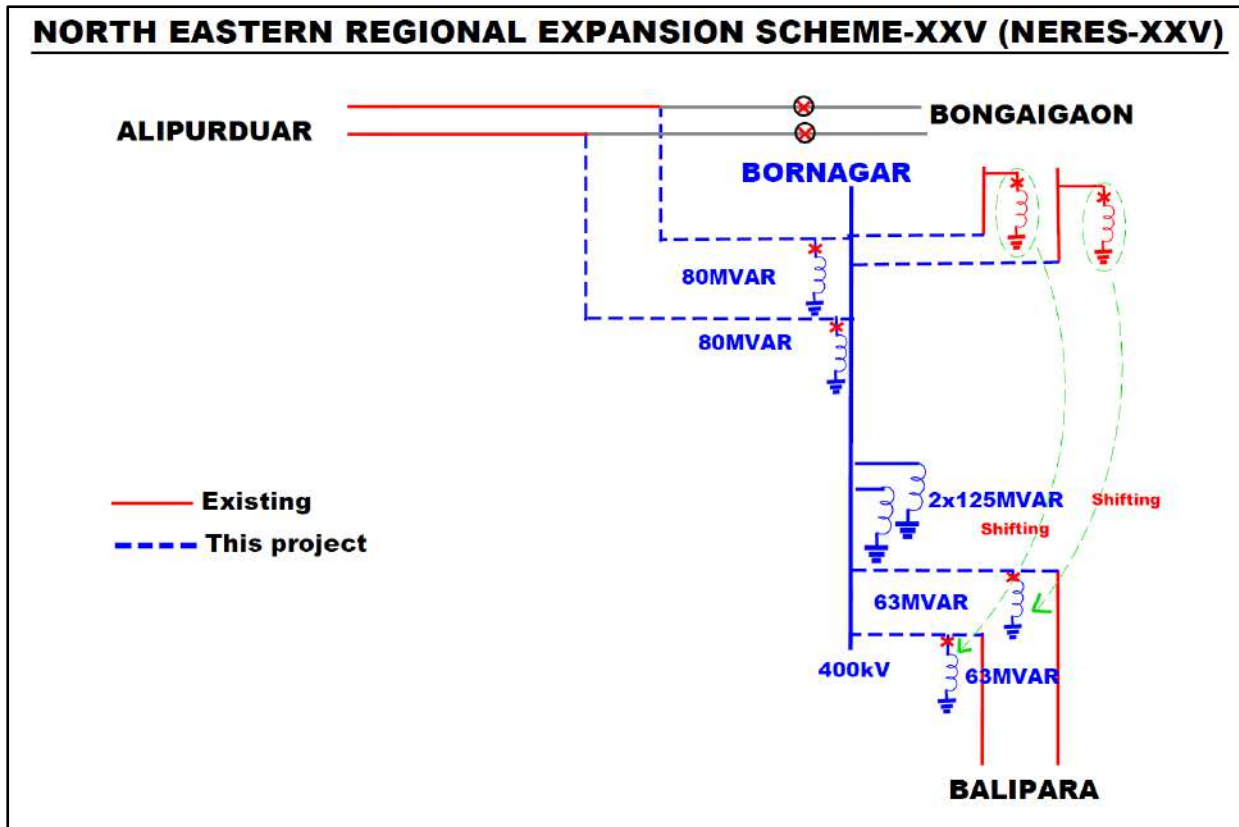
Sl. No.	Scope of the Transmission Scheme	Capacity/ km
	<p>765kV line bays (along with space for switchable line reactor) for future lines: 8 nos.</p> <p>400kV line bays (along with space for switchable line reactor) for future lines: 8 nos.</p> <p>220kV line bays: 10 nos.</p> <p>4x330MVAR, 765kV Bus Reactors (13x110MVAR single phase including one spare unit) along with associated bays</p> <p>3x125MVAR, 420kV Bus Reactors along with associated bays</p> <p>765kV Bus Sectionalizer: 1 set</p> <p>400kV Bus Sectionalizer: 1 set</p> <p>220kV Bus Sectionalizer: 1 set</p> <p>220kV Bus Coupler bays: 2 no.</p> <p>220kV Transfer Bus Coupler bays: 2 no.</p>	<p>(ISTS) 400kV D/c (Quad) line formed after shifting of Alipurduar (POWERGRID) – Bongaigaon (POWERGRID) 400kV D/c (Quad) line from Bongaigaon (POWERGRID) end to Bornagar (ISTS) S/s]</p> <p>ii) 2 no. [for termination of Bongaigaon (POWERGRID) – Bornagar (ISTS) 400kV D/c (Quad) line formed after LILO of both circuits of existing Bongaigaon (POWERGRID) – Balipara (POWERGRID) 400kV D/c (Quad) line at Bornagar (ISTS)]</p> <p>iii) 2 no. with provision for installation of 1x63MVAR switchable line reactor [for termination of Bornagar (ISTS) – Balipara (POWERGRID) 400kV D/c (Quad) line formed after LILO of both circuits of existing Bongaigaon (POWERGRID) – Balipara (POWERGRID) 400kV D/c (Quad) line at Bornagar (ISTS)]</p>
2.	<p>LILO of both circuits of existing Bongaigaon (POWERGRID) – Balipara (POWERGRID) 400kV D/c (Quad) line at Bornagar (ISTS)</p>	<p>About 5 km (2.5km Loop-in + 2.5km Loop-out)</p>
3.	<p>%Shifting of the existing line reactor of 63MVAR (along with NGR and switching equipment) at Bongaigaon (POWERGRID) S/s end in Bongaigaon (POWERGRID) – Balipara (POWERGRID) 400kV D/c (Quad) line and installation of the same as switchable line reactor (along with NGR and NGR bypass arrangement) at Bornagar (ISTS) S/s end in the Bornagar (ISTS) – Balipara (POWERGRID) 400kV D/c (Quad) line formed after above LILO.</p>	<ul style="list-style-type: none"> • 420kV, 1x63MVAR switchable line reactor (along with NGR and NGR bypass arrangement) - 2 no. [line reactor along with NGR and switching equipment to be shifted from Bongaigaon (POWERGRID) S/s and installed at Bornagar (ISTS) S/s] • Switching equipment for 420kV, 1x63MVAR switchable line reactor (along with NGR and NGR bypass arrangement) - 2 no.

Sl. No.	Scope of the Transmission Scheme	Capacity/ km
4.	#Disconnection of Alipurduar (POWERGRID) – Bongaigaon (POWERGRID) 400kV D/c (Quad) line from Bongaigaon (POWERGRID) end and extension of the line for termination at Bornagar (ISTS) S/s so as to form Alipurduar (POWERGRID) – Bornagar (ISTS) 400kV D/c (Quad) line	About 70km
5.	Installation of 420kV, 1x80MVA switchable line reactor at Bornagar (ISTS) end in each circuit of Alipurduar (POWERGRID) – Bornagar 400kV D/c (Quad) line formed after shifting of Alipurduar (POWERGRID) – Bongaigaon (POWERGRID) 400kV D/c (Quad) line from Bongaigaon (POWERGRID) end to Bornagar (ISTS) S/s	<ul style="list-style-type: none"> • 420kV, 1x80MVA switchable line reactor - 2 no. • Switching equipment for 420kV, 1x80MVA switchable line reactor - 2 no.

Note:

- (i) %The existing Bongaigaon (POWERGRID) – Balipara (POWERGRID) 400kV D/c (Quad) line has line reactor of 63MVA at both ends of the line along with 30% FSC at Balipara (POWERGRID) end. With LILO of this line at Bornagar (ISTS) S/s, the line reactors (along with NGR and switching equipment) needs to be shifted from Bongaigaon (POWERGRID) end and installed at Bornagar (ISTS) end in the Bornagar (ISTS) – Balipara (POWERGRID) line section as switchable line reactor (with NGR bypass arrangement).
- (ii) #Siliguri (POWERGRID) – Bongaigaon (POWERGRID) 400kV D/c (Quad) line was implemented by M/s East North Interconnection Company Limited (M/s ENICL, SPV of M/s Sterlite). Line bays at both ends were implemented by POWERGRID. Further, this line was LILOed at Alipurduar (POWERGRID) S/s by POWERGRID along with implementation of line bays for termination of line, resulting in formation of Alipurduar (POWERGRID) – Bongaigaon (POWERGRID) 400kV D/c (Quad) line. The Alipurduar (POWERGRID) – Bongaigaon (POWERGRID) 400kV D/c (Quad) line (partly owned by M/s ENICL and partly by POWERGRID) is to be disconnected from Bongaigaon (POWERGRID) end and extended for termination at Bornagar (ISTS) S/s so as to form Alipurduar (POWERGRID) – Bornagar (ISTS) 400kV D/c (Quad) line. Upon shifting of line, the line section left unutilised at Bongaigaon (POWERGRID) end needs to be kept anti-theft charged so that the same can be used in future for termination of new line. Further, upon shifting of Alipurduar (POWERGRID) – Bongaigaon (POWERGRID) line from Bongaigaon (POWERGRID) S/s to Bornagar (ISTS) S/s, connectivity of all operational communication links through Bongaigaon has to be ensured. For the same additional OPGW and FOTE needs to be planned as per requirement.
- (iii) The line lengths mentioned above are approximate as the exact line length shall be obtained after the detailed survey.

Implementation schedule: 30 months from allocation



2.2. Assam & Meghalaya

(a) NERES-XXIV (Reconductoring of Khandong - Haflong - Jiribam)

Khandong (NEEPCO) – Umrangshu (AEGCL) – Haflong (POWERGRID) – Jiribam (POWERGRID) 132kV corridor is owned by POWERGRID (excluding LILO portion at Umrangshu which is owned by AEGCL).

The load at Umrangshu (AEGCL) S/s is expected to rise to about 37MW (15MW present and 21.75MW new load of cement factory) by 2024 timeframe. With the addition of the load, critical loading & low voltage were observed in the Khandong (NEEPCO) – Umrangshu (AEGCL) – Haflong (POWERGRID) – Jiribam (POWERGRID) 132kV S/c line under normal and outage conditions. It was noted that the thermal limit of this 132kV corridor is about 185A (ACSR Panther) i.e. 42MVA (40MW @ 0.95pf).

Accordingly, to strengthen this corridor and to meet the additional load requirement of AEGCL at its Umrangshu S/s, reconductoring of this 132kV corridor with single HTLS conductor of rating 600A was discussed and agreed in the 25th CMETS-NER held on 29-11-2023.

ISTS portion of this corridor is to be reconducted under this scheme. The LILO portion of the corridor at Umrangshu (AEGCL) S/s is owned by AEGCL, accordingly, reconductoring of this LILO portion along with replacement of CTs of 132kV line bays of the LILO line at Umrangshu (AEGCL) S/s is being taken up by AEGCL under intra-state scheme in matching timeframe of ISTS.

Sl. No.	Scope of the Transmission Scheme	Capacity/ km
1.	<p>Reconductoring of Khandong (NEEPCO) – Halflong (POWERGRID) 132kV S/c line [excluding the LILO portion of this line at Umrangshu (AEGCL) S/s, which is owned by AEGCL] with Single HTLS conductor of ampacity 600A (at nominal voltage level)</p> <p><i>Note: Reconductoring of LILO portion of this line along with replacement of CTs of 132kV line bays of the LILO line at Umrangshu (AEGCL) S/s is to be taken up by AEGCL under intra-state scheme.</i></p>	63.036
2.	Reconductoring of Halflong (POWERGRID) – Jiribam (POWERGRID) 132kV S/c line with Single HTLS conductor of ampacity 600A (at nominal voltage level)	100.63

Implementation time-frame: 18 months from allocation

