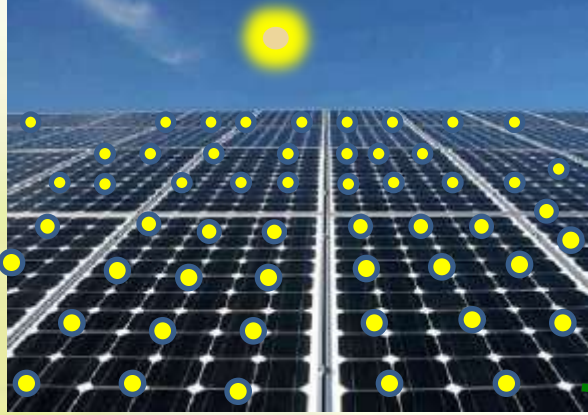


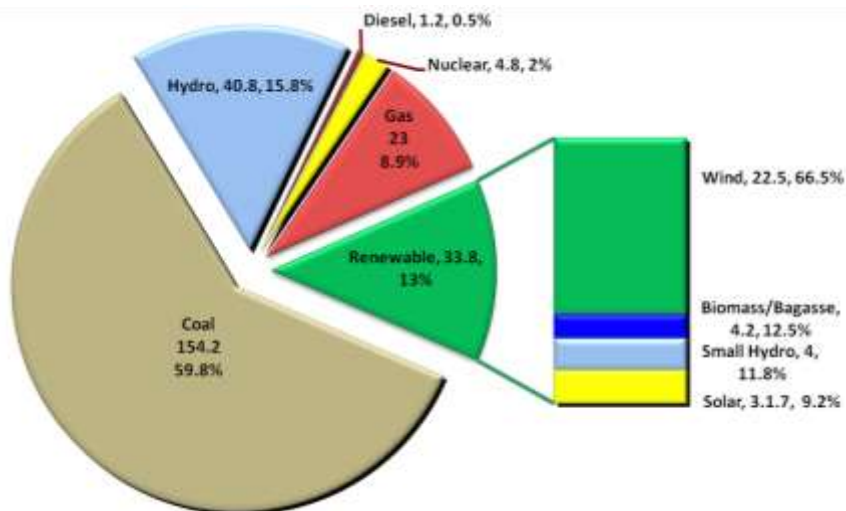
Green Energy Corridors



INDIAN POWER SCENARIO

Total Installed Capacity - 258 GW

Figures in GW (as on 31.12.2014)

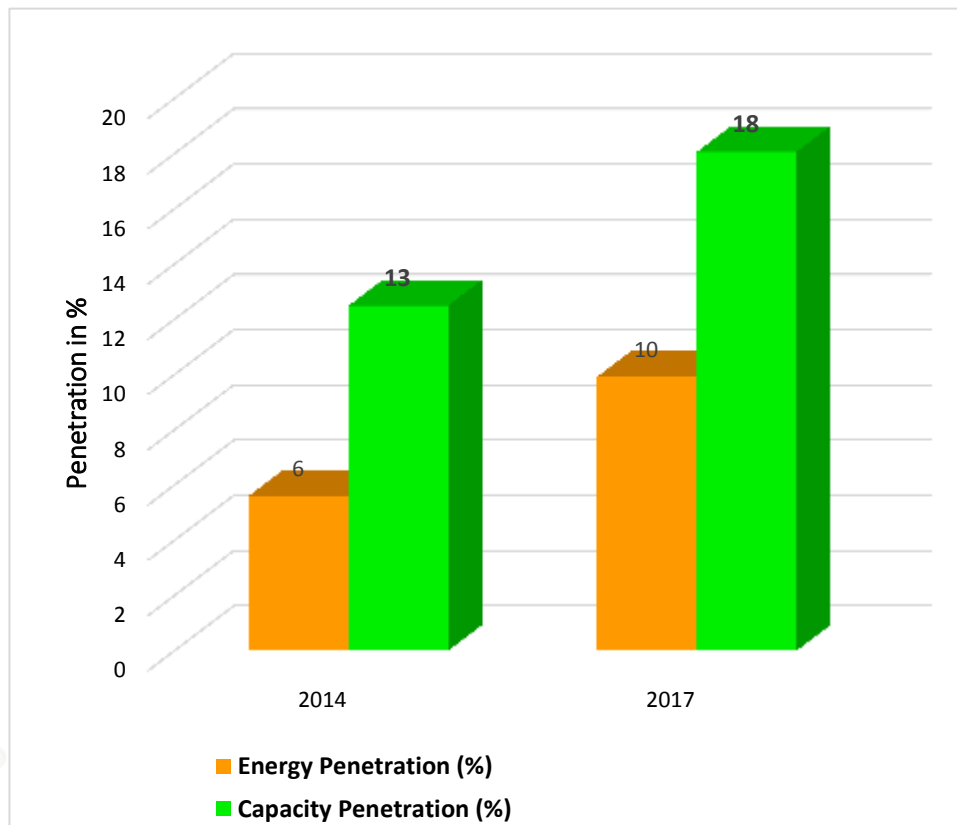


Installed Capacity = 257.8GW

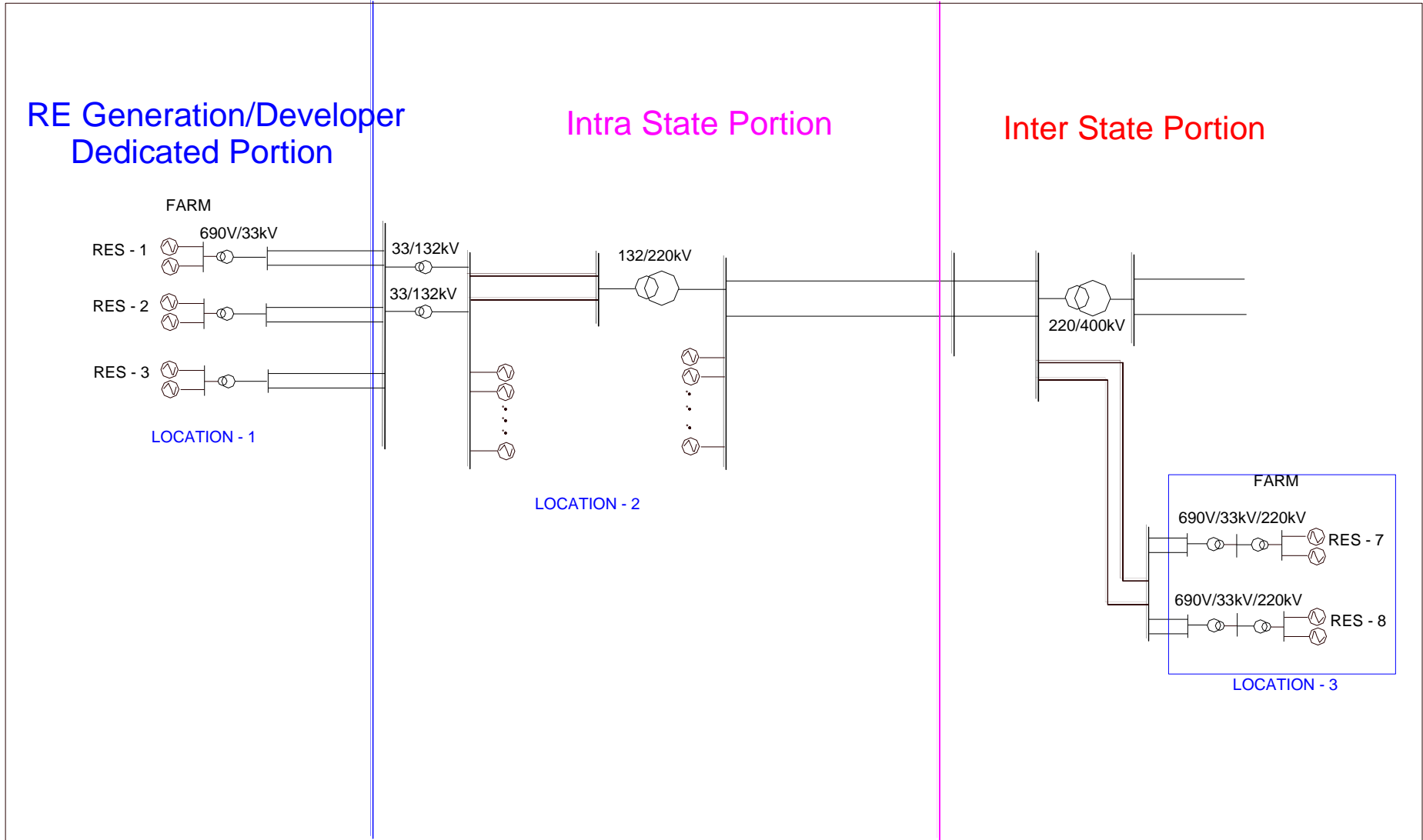
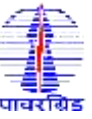
Renewable Capacity = 33.8GW

Generation Mix

RE capacity addition plan in 12th Plan-33GW

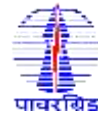


TYPICAL TRANSMISSION ARRANGEMENT OF RE GENERATION

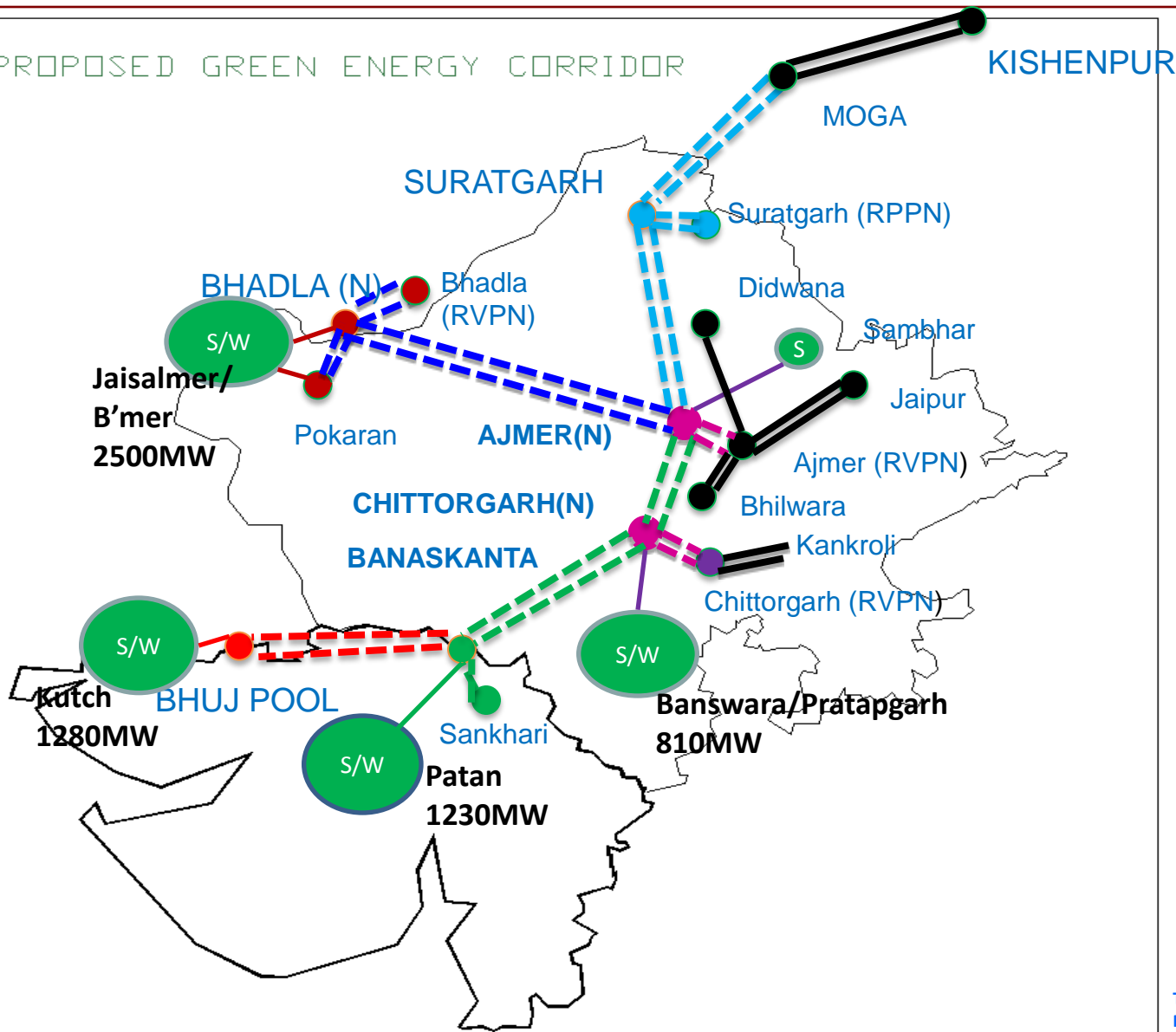


- Transmission System Strengthening at Intra State as well as Inter state level following Integrated Planning approach
- Dynamic reactive Compensation (SVC/STATCOM) at strategic locations
- Real time dynamic state measurement scheme along with communication system
- Grid Scale Energy Storage solutions
- Renewable Energy management centers equipped with advanced RE forecasting tools

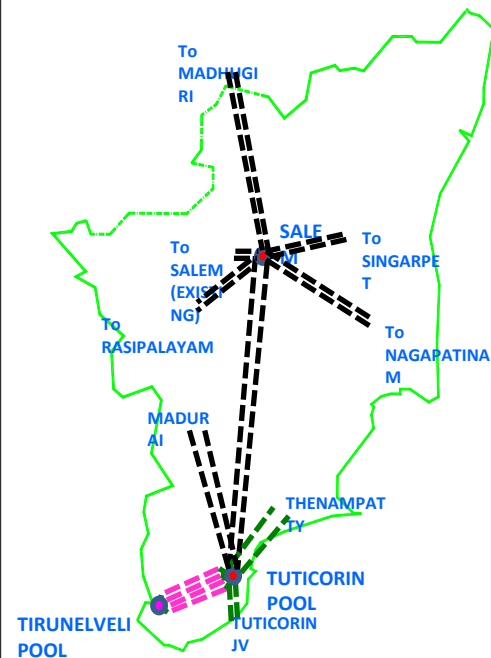
GREEN ENERGY CORRIDORS-ISTS



PROPOSED GREEN ENERGY CORRIDOR



- - - - - Tranche-I
- - - - - Tranche-II
- - - - - Tranche-III
- - - - - Other
- - - - - 13th Plan



PROJECT SUMMARY

GEC: ISTS-PART-A (Tranche-I)

❖ SCOPE

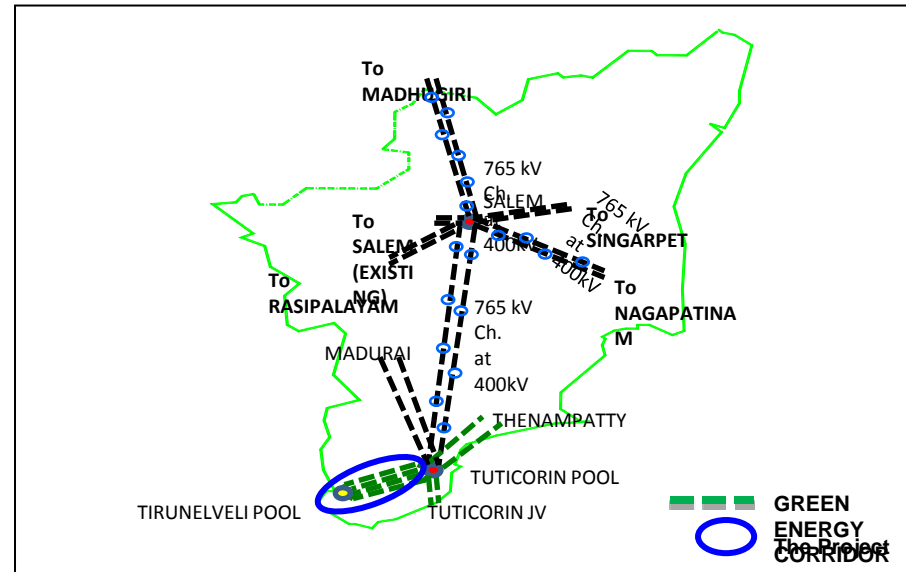
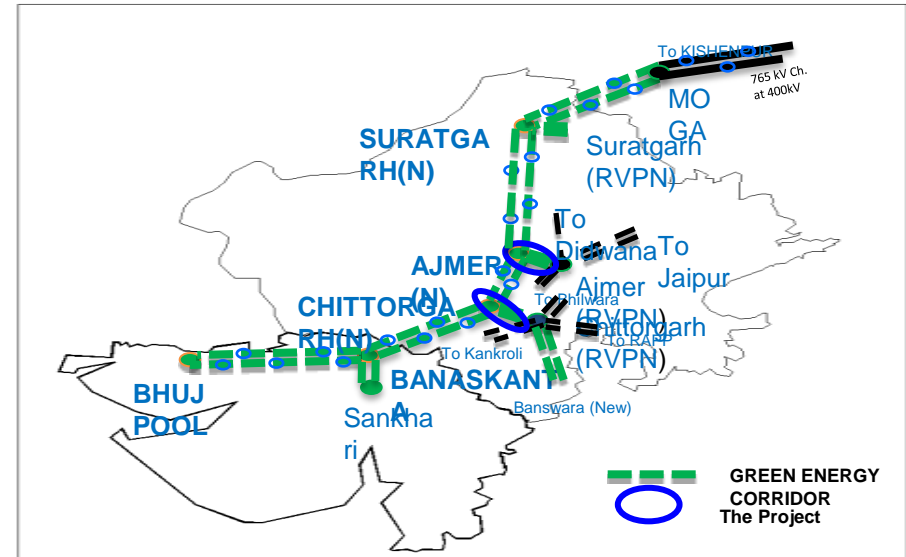
Rajasthan (Northern Region)

- (i) Ajmer (New) – Ajmer (RVPN) 400kV D/c (Quad) line -57 km
- (ii) Chittorgarh(New) – Chittorgarh (RVPN) 400kV D/c (Quad) line -25km
- (iii) Establishment of 2x1500 MVA, 765/400kV AIS S/s at Chittorgarh
- (iv) Establishment of 2x1500 MVA, 765/400kV AIS S/s at Ajmer (New)
- (v) Associated Reactive Compensation

Tamil Nadu (Southern Region)

- (i) Tirunelveli Pooling Station – Tuticorin Pooling Station 400 kV 2xD/c (Quad) line – Line-1: 54km and Line-2: 56km
- (ii) Establishment of 2x500 MVA, 400/230kV GIS S/s at Tirunelveli Pooling Station
- (iii) Associated Reactive Compensation

❖ COMMISSIONING SCHEDULE – 24 months



PROJECT SUMMARY

GEC: ISTS-PART- B (Tranche-II)

❖ SCOPE

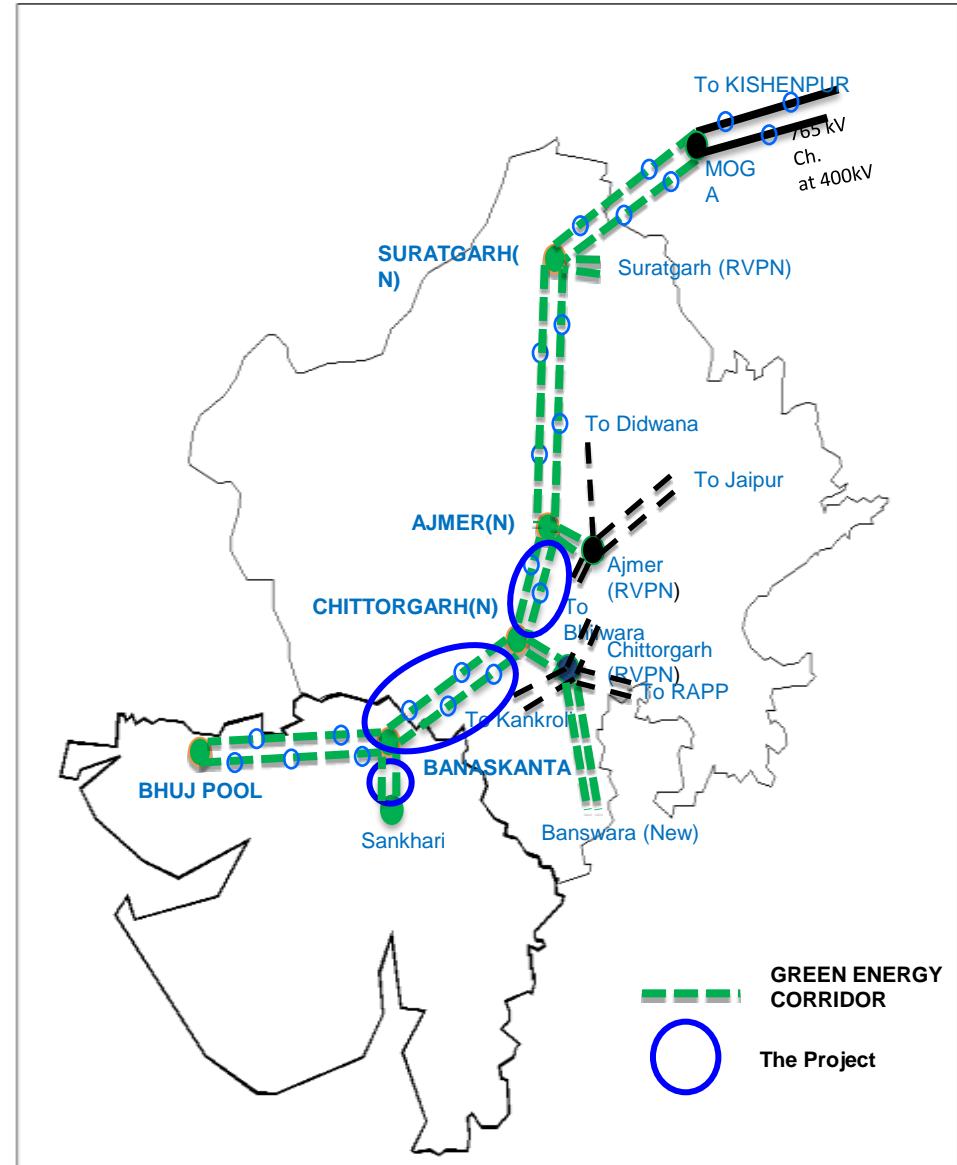
Gujarat (Western Region)

- (i) Establishment of 765/400/220kV (765/400 kV- 2x1500 MVA & 400/220kV- 2x500MVA) AIS Sub-station at Banaskanta
- (ii) Banaskanta – Chittorgarh 765kV D/c line - 285km
- (iii) Banaskanta – Sankhari 400 kV D/c line – 26km
- (iv) Associated Reactive Compensation

Rajasthan (Northern Region)

- (i) Chittorgarh – Ajmer(New) 765kV D/c line – 199km
- (ii) Associated Reactive Compensation

❖ **COMMISSIONING SCHEDULE – 36 months**



PROJECT SUMMARY

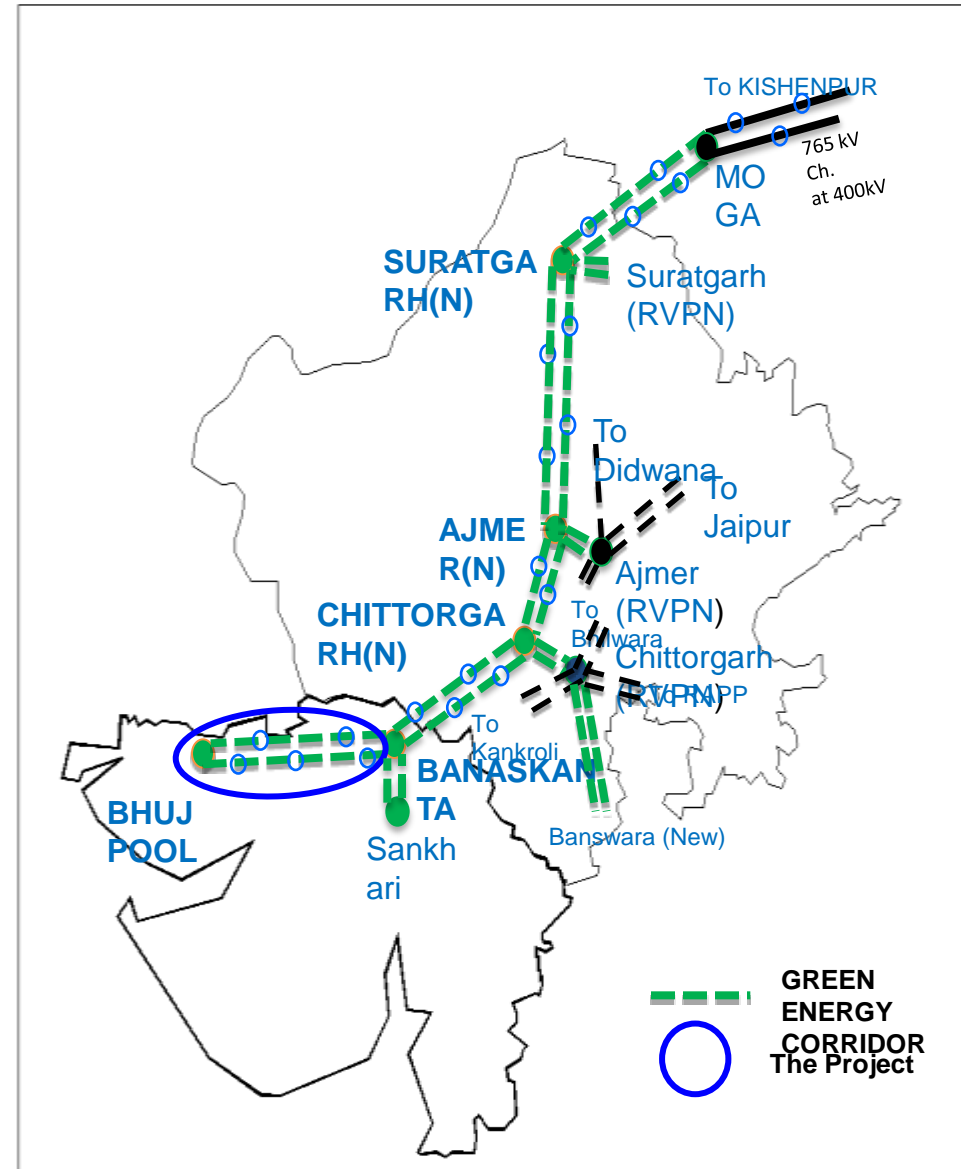
GEC: ISTS-PART- C (Tranche-III)

❖ SCOPE

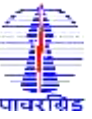
Gujarat (Western Region)

- (i) Establishment of 765/400/220kV (765/400 kV-2x1500 MVA & 400/220kV-2x500MVA) AIS Sub-station at Bhuj Pool
- (ii) Bhuj Pool – Banaskanta 765kV D/c line -308km
- (iii) Associated Reactive Compensation

❖ COMMISSIONING SCHEDULE – 36 months

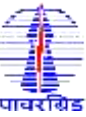


FUNDING ARRANGEMENT-KFW LOAN



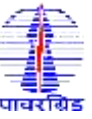
Item	KfW Tranche-I	KfW Tranche-II	KfW Tranche-III	Total
Inter State				
Trans. Scheme	Eur 173 mn (Rs 1383 Cr)	Eur 466 mn (Rs 3724 Cr)	Eur 294 mn (Rs 2356 Cr)	Eur 933 mn (Rs 7463 Cr)
Loan	Eur 121 mn (Rs 968 Cr)	Eur 326 mn (Rs 2607 Cr)	Eur 206 mn (Rs 1649 Cr)	Eur 653 mn (Rs 5224 Cr)

GREEN ENERGY CORRIDOR : INTER-STATE TRANSMISSION SYSTEM - STATUS



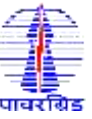
- **GEC:ISTS Scheme is divided into Part-A (Tranche-I), B (Tranche-II) & C (Tranche-III)**
- **Estimated cost: Rs. 7463 Cr. (Eur 933 millions)**
- **KfW's No objection for DPRs obtained**
- **Loan negotiations held in Nov.' 2014**
- **Loan and Separate Agreement for Euro 500 million signed in Dec.'2014**
- **Guarantee Agreement between Gol and KfW also signed in Dec 2014**
- **Legal opinion of the Borrower and Guarantor and other documents for fulfillment of the conditions under the loan have been submitted in Jan/Feb.'2015 to KfW.**

PROCUREMENT STATUS



- ❖ Total Packages GEC:ISTS Part A, B & C: 48 Nos.
- ❖ Procurement undertaken as per the agreed Procurement Guidelines of KfW
 - Invitation for Bids issued: 27 major packages
 - Bids opened for 19 packages till Feb'15.
 - Award of packages progressively from March/ April'15.
- ❖ Balance packages under progress

COMPLIANCE OF PROCEDURES



- ❖ POWERGRID has in-house developed Environmental Social Policy and Procedures (ESPP) duly accepted by the World Bank under its Use of Country System (UCS)
- ❖ As per Loan Agreement signed with KfW, POWERGRID shall follow its Environmental & Social Impact Assessment (EIA) and its Environmental Management as per standards laid down in its ESPP
- ❖ Screening & Scoping Report in line with ESPP covering Environmental and Social issues for GEC :ISTS has been submitted and reviewed by KfW
- ❖ Detailed Environmental Assessment Report & Environmental Management Plan incorporating KfW's comments shall be prepared along with Survey
- ❖ Utmost transparency and efficiency shall be complied



Thank You