

BIHAR STATE POWER TRANSMISSION COMPANY LTD: PATNA

Registered Office: 4th Floor, Vidyut Bhawan, Baily Road, Patna
Corporate Identity No. (CIN) U40102BR2012SGC018889 Web site- www.bsptcl.in

Standard Operating Procedure (S.O.P.)

Case-I: In case of outage of 315MVA ICT of Patna (PG) & 500MVA ICT remaining in service

Action to be taken:

- (a) Khagaul GSS will shed Bihta & Digha GSS immediately to get instant relief of approx 150 MW.
(b) Incomer of 220 KV Patna (PG) & Sipara will be isolated at Khagaul GSS (subject to prior approval of ERLDC).
(c) In case of Khagaul is not synchronised with Ara (PG) then ERLDC shall be requested for extending power to Khagaul.
(d) SLDC reschedule all connected GSS to ensure 180 MW power available at Khagaul GSS.
- Khagaul GSS will start availing power from Ara (PG).
- Isolate Patna (PG)-Fatuha line at Patna (PG) immediately.
- After stabilisation of system at Khagaul, Khagaul will take action for reduction of rural load & restoration of PSS connected to Digha & Bihta etc. as per availability of power and in guidance of SLDC.

Case-II: In case of outage of 500 MVA ICT of Patna (PG) & 315 MVA ICT remaining in service

Action to be taken:

- Simultaneous tripping of 220KV Patna (PG)-Khagaul & 220 KV Sipara-Khagaul line may be done through overload criterion of ICT-2(315 MVA) as recommended by PGCIL, under this condition power to 220 KV Khagaul will remain zero from Patna (PG) and Sipara (BSPTCL). However, Ara (PG) power shall be available at Khagaul, Patna (PG) power at Fatuha & Biharsharif (PG) power at Fatuha GSS.
- 250 MW power will be available at Patna (PG) which will be used for 132 KV power supply to Jakkanpur, Mithapur & Karbigahiya. All 33 kV feeders at Sipara GSS are to be disconnected.
- Isolate Patna (PG)-Fatuha line at Patna (PG) immediately to avoid drawl of power from Patna (PG).
- After stabilisation of system at Khagaul, Khagaul will take action for shedding of rural load & restoration of PSS connected to Digha & Bihta etc. as per availability of power in accordance with guidance of SLDC.

Case-III: In case of outage of both 315MVA & 500MVA ICT at Patna (PG)

Action to be taken:

- Under this condition power to 220 KV Khagaul will remain zero from Patna (PG) to Sipara (BSPTCL). However, Ara (PG) power shall be available at Khagaul & Biharsharif (PG) power at Fatuha GSS
- 220 KV Fatuha power will be extended to Sipara & then after transformation to 132KV Jakkanpur.
- In case of unavailability of Fatuha power at 220 KV Sipara, the 132 KV power shall be available from Fatuha at Mithapur with reduction in load at Mithapur & Karbigahia. Thereafter 132 KV shall be extended to Jakkanpur from Karbigahia. However, the total load of Karbigahiya & Jakkanpur will be restricted to 80 MW only.
- 220 KV Biharsharif Power via Fatuha shall be made available at Sipara (BSPTCL) and subsequently power shall be extended to GSS Jakkanpur & Mithapur. Simultaneously, rescheduling of load at Fatuha, Katra, Gaighat, Jakkanpur, Mithapur & Karbigahiya will be done.
- Isolate Patna (PG)-Fatuha line at Patna (PG) immediately to avoid drawl of power from Fatuha.
- Isolation of Masaudhi & Jahanabad from Fatuha and shall be shifted on Gaya GSS with suitable power allocation.

(Handwritten signatures and initials)

Case IV: In case one ckt of 220KV D/C Patna (PG)-Sipara goes under breakdown.

Action to be taken:

1. 132 KV Bihta shall be shaded from 220/132/33 KV GSS Khagaul.
2. Incomer of 220 KV Sipara will be isolated at Khagaul GSS.

Case V: In case of 220KV D/C Patna (PG)-Gaurichak goes under breakdown.

Action to be taken:

1. (a) Khagaul GSS will shed Bihta & Digha GSS immediately to get instant relief of approx 150 MW.
(b) Incomer of 220 KV Sipara will be isolated at Khagaul GSS.
(c) SLDC shall reschedule load of Khagaul, Digha and Bihta as per load constraint of 220KV Patna(PG)-Khagaul transmission line.
2. 220 KV Biharsarif Power from 220/132 KV Fatuha shall be made available at Sipara and subsequently power to GSS Jakkanpur & Mithapur e.t.c. Simultaneously, rescheduling of load at Fatuha, Katra, Gaighat, Jakkanpur, Mithapur & Karbigahiya will be done.
3. Isolation of Masaudhi & Jahanabad from Fatuha and shall be shifted on Gaya GSS with suitable power allocation.
4. Khagaul GSS will start availing power from Ara (PG).

Case VI: In case of 132KV D/C Gaurichak-Jakkanpur goes under breakdown.

Action to be taken:

1. 132/33 KV Jakkanpur GSS shall avail power from 132 KV Karbigahiya-Jakkanpur line considering the load constraint of maximum 80 MW through 132 KV Mithapur-Karbigahiya XLPE power cable.
2. PESU control room shall be instructed to reduce load of Mithapur & Karbigahiya complex up to 50 MW.

Case VII: In case of 220KV D/C Biharsarif-Fatuha line goes under breakdown.

Action to be taken:


1. Isolation of Masaudhi & Jahanabad from Fatuha and shall be shifted on Gaya GSS with suitable power allocation.
2. GSS Katra, Gaighat & Fatuha shall be rescheduled by SLDC as per availability of power at Patna (PG).

Case VIII: In case of either 13KV Fatuha-Gaighat or Fatuha-Katra line goes under breakdown.

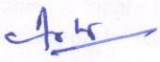
Gaighat GSS & Katra GSS are interconnected at 132 KV level as such these grids can share load available at other end.


Case I:-In case 132 KV Fatuha-Gaighat lines goes under breakdown, Gaighat can draw full load from GSS Katra as the transmission line capacity of 132 Fatuha-Katra is 150 MW.


Case II:-In case 132 KV Fatuha-Katra line goes under breakdown, GSS Katra may avail load up to the extent load of Katra & Gaighat is 120 MW. As soon as load reaches peak of 120 MW, some rural feeder of Katra may be shaded or Katra PSS may be shifted on Fatuha GSS.



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(J.P. Singh)
GM-cum-CE Trans zone, Patna

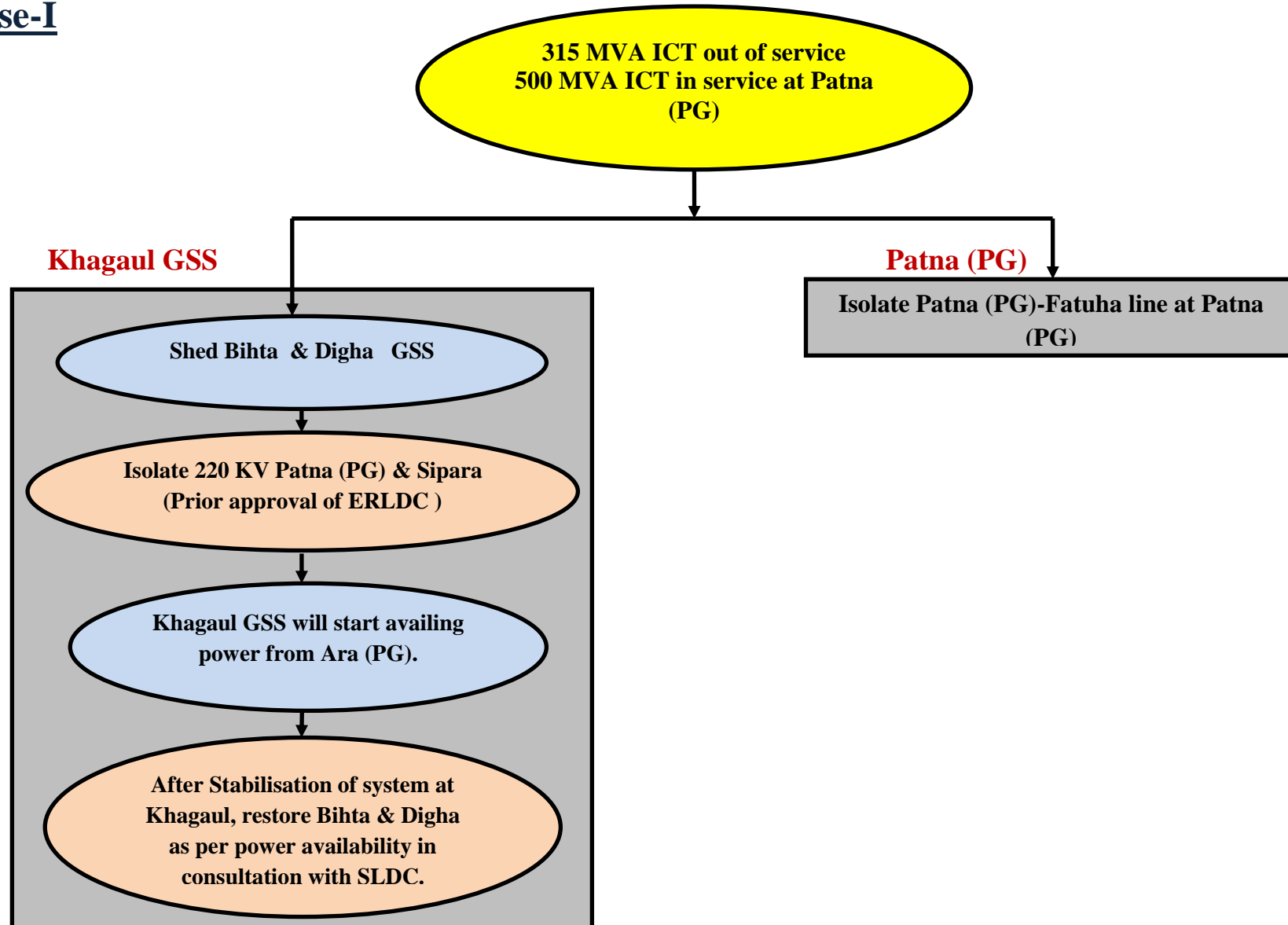
BSPTCL

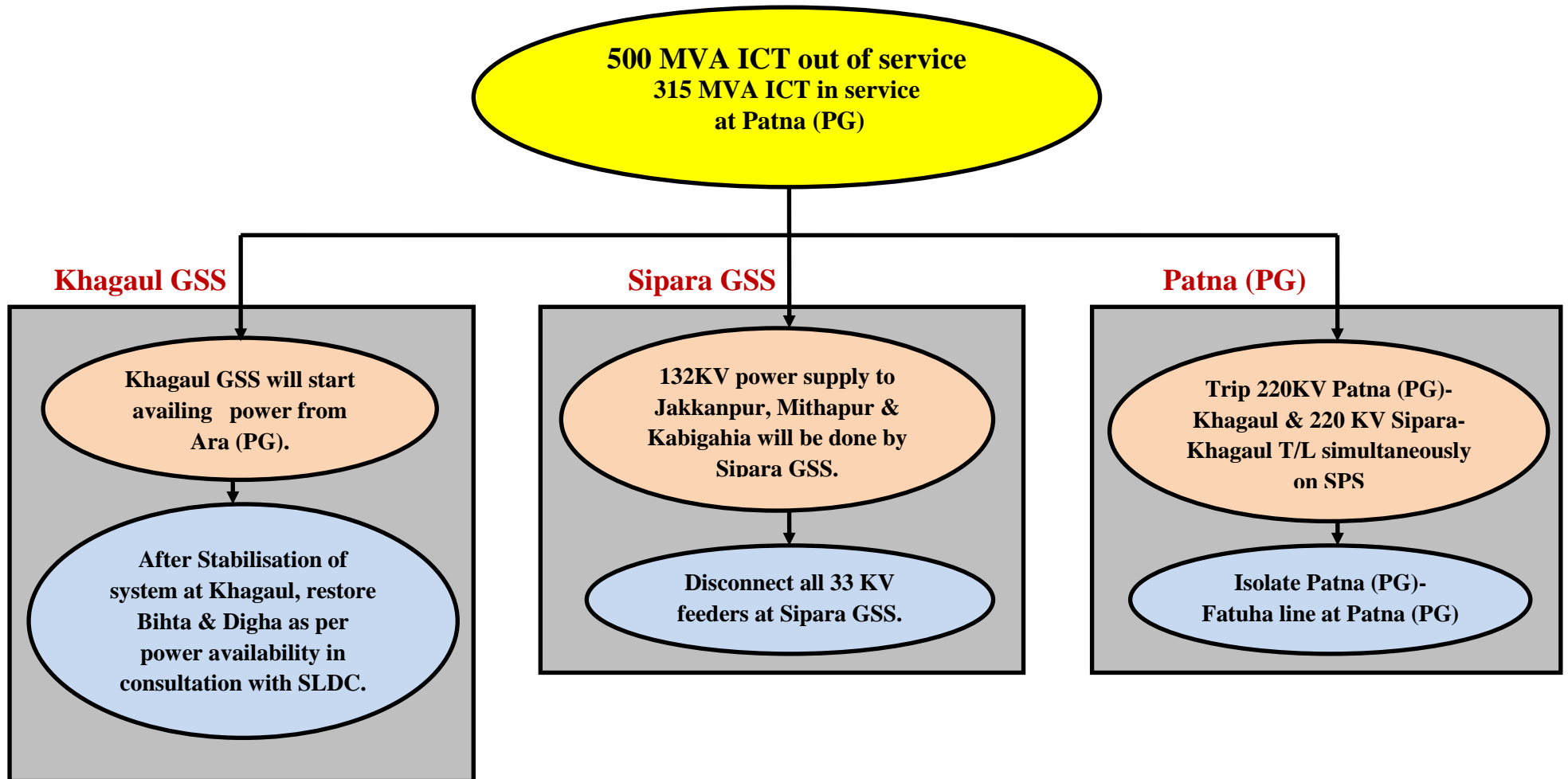


SOPs (Standard Operating Procedures)

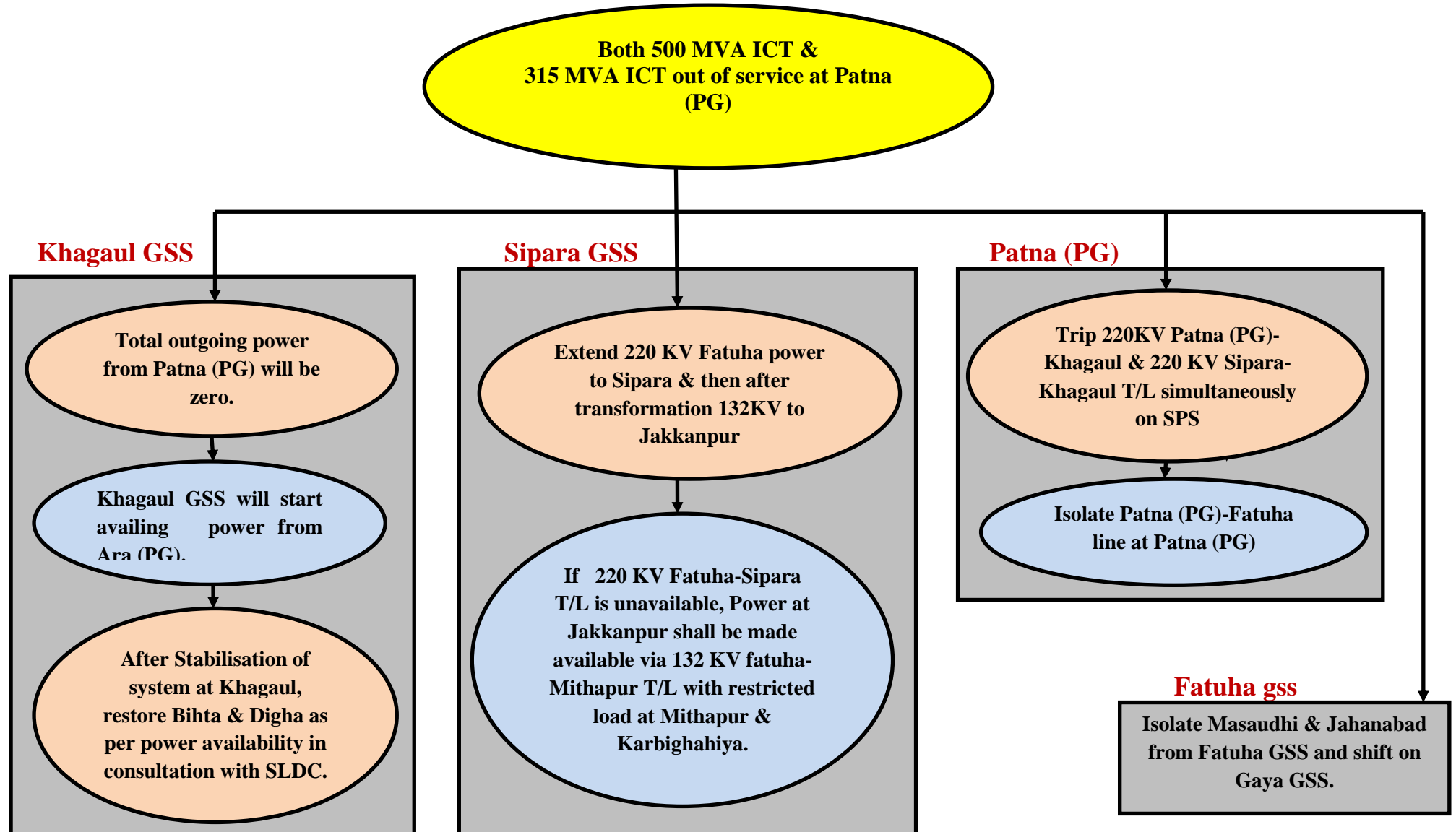
FLOW DIAGRAM OF SOP

Case-I

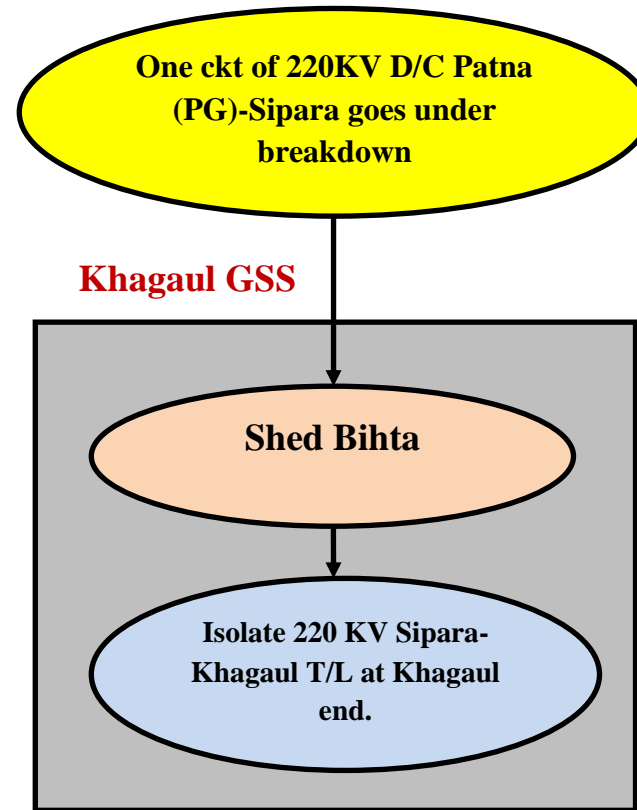


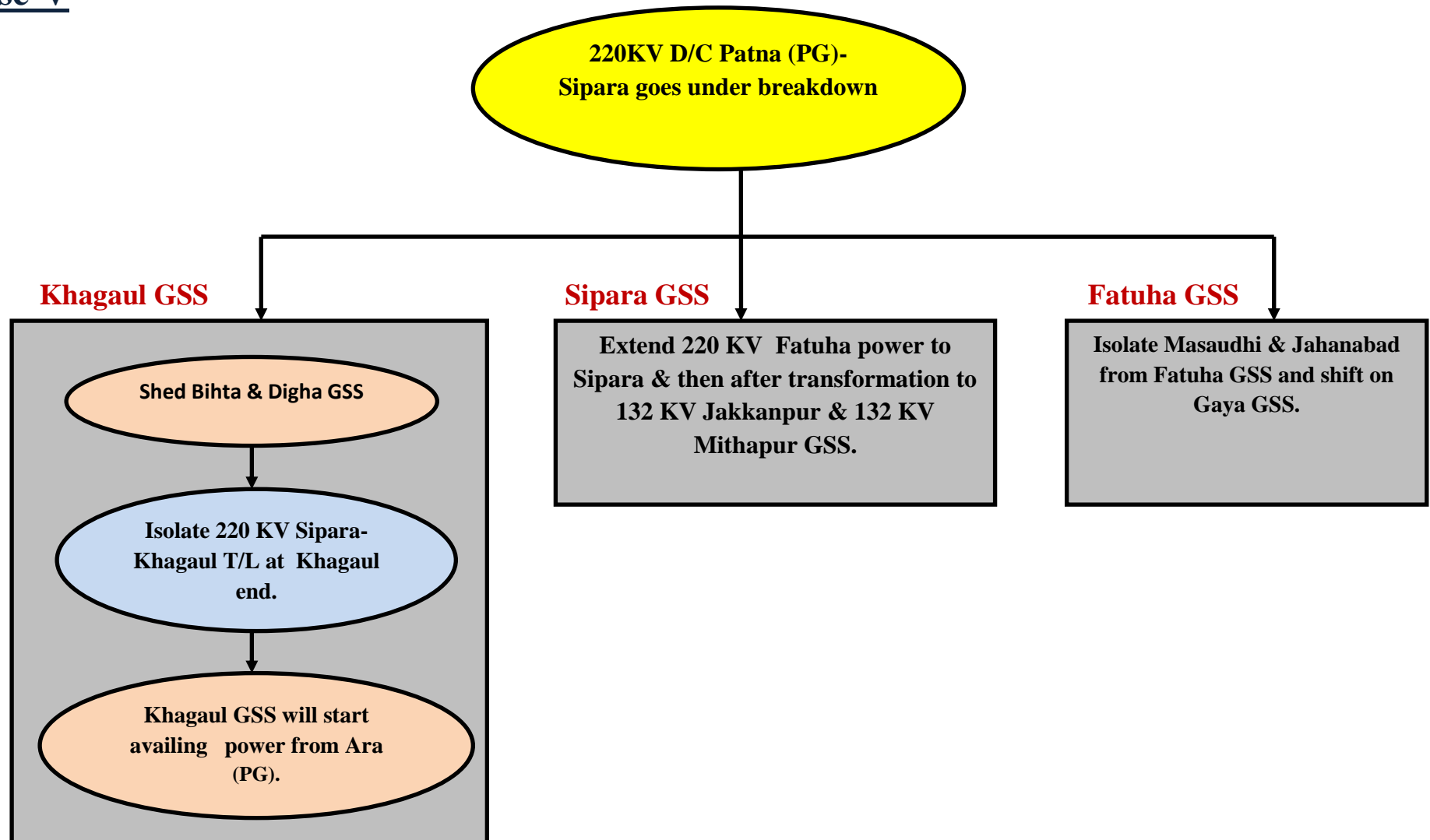
Case-II

Case-III

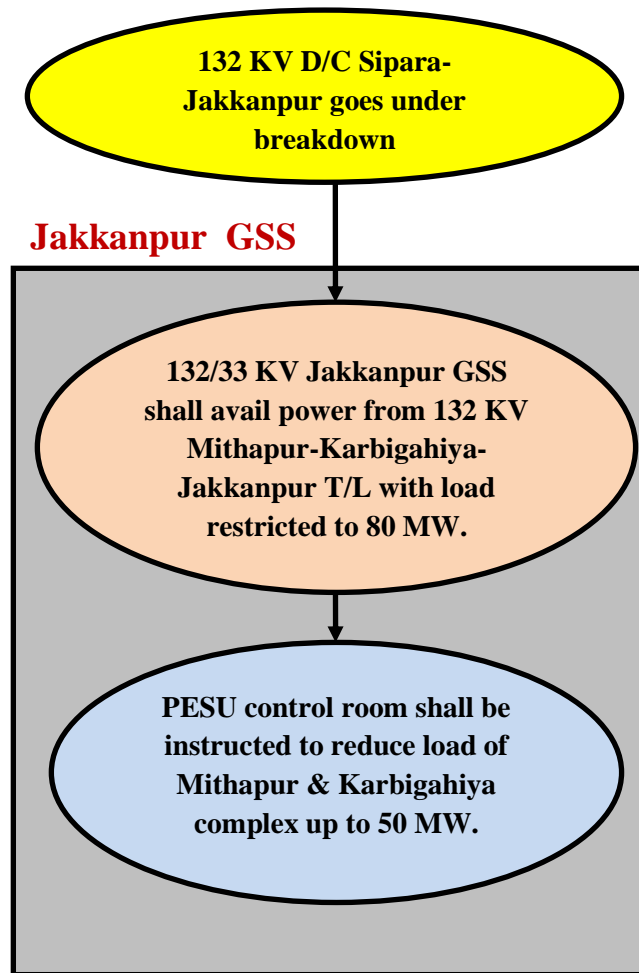


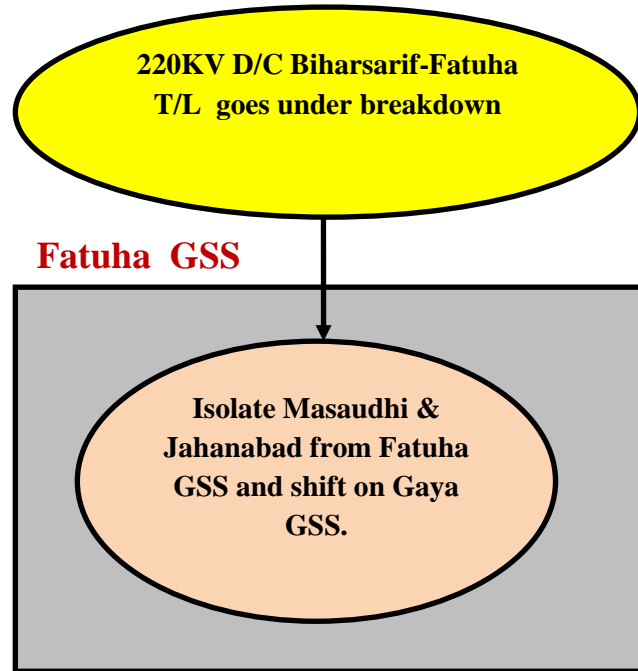
Case-IV



Case-V

Case-VI



Case-VII

Case-VIII