

SCHEDULING, METERING AND ENERGY ACCOUNTING
OF CAPTIVE POWER PLANT

Captive power plant whose fixed cost is not fully borne by beneficiaries and supplying power to their own units located different places through wheeling arrangement. The surplus power are scheduled through short term transaction in open market either by inter/intra state bilateral transaction and/or inter state collective transactions. In order to optimize the power injection by such plant and to fully utilize its capacity, intra state ABT provides the platform by scheduling arrangement. Further, all such transactions are to be scheduled by different Nodal Agency and governed by different regulations, their scheduling, metering and energy accounting poses special challenges.

After consideration of all aspects and amendment order no. 3 of 2010 issued by GERC to be read with order no. 3 of 2006, scheduling and accounting procedure devised for practical implementation. We have considered different aspects covered in subsequent paragraph for scheduling, metering and energy accounting treatment of captive power plants injecting surplus power into grid.

Wheeling Transaction:

Since wheeling transactions for which full capacity charge is not borne by receiving entity and the agreement provides single component, their scheduling arrangement is to be done without availability declaration. Such transaction are declaring generation as per the requirement of receiving entity, and hence it can be decided by giving mutually agreed schedules by one entity. Therefore, Intra State Entity who has availed open access through wheeling arrangement for consumption to their own company, scheduling of such transaction is to be furnished to SLDC by submitting mutually agreed schedule between injecting and receiving utility. In this case, declaration and schedule will be same.

Open Access Transaction (to third party)

Intra state company such as CPPs are supplying power to third party (other than their own company) either trading agency or power exchange through intra state or inter state open access transaction. Such transaction will be scheduled as per the day ahead/same day schedule issued by Nodal Agency by adjusting pool losses. The revision in such schedule will be carried out as per the open access regulation issued by appropriate commission.

Generation schedule when injecting entity entered for more than one transaction

In the event of scheduling of more than one transaction, the injection schedule will be prepared at ex-bus periphery of generating station by summation of all individual transaction. In case of inter state transaction; the schedule of ex-bus periphery will be derived by adjustment of transmission losses.

Settlement of Energy Charges

The captive power plant injecting surplus power will be paid by their beneficiaries as per their contract agreement as per the scheduled energy computed by SLDC and issued through consolidated State Energy Account.

Treatment of contract demand with Distribution licensee

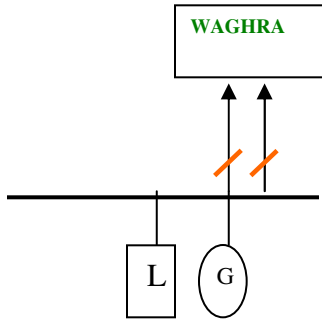
The captive power plant has retail contract with respective distribution licensee for the use of their consumption. Such transaction against retail contract shall not be covered under scheduling ambit; it is excluded while implementing treatment of scheduling. However, the captive power plant is continue to pay the demand charges (or minimum charges) as applicable, they are entitled to draw power from distribution licensee without giving advance notice and by their own requirement.

It is necessary that consumer tariff and calculation of demand charges as 30 minutes or hourly basis as applicable for consumer under relevant tariff regulation/order shall be applicable without change. However, the energy calculation will be done on 15 minute basis energy meter and 30 minute or hourly energy will have to calculate by summation of 15 minute energy. The energy drawn by captive power plant will be considered as supplied by distribution licensee if the export schedule is zero. The distribution licensee has to carry out the energy of such blocks only.

Applicability of Gaming to Captive Power Plant : The captive power plant whose fixed cost is not fully borne by beneficiaries and injecting surplus power into grid after their own consumption, the surplus energy injection into grid cannot controlled by generator parameters only unlike to other generating stations. When the output is not fully controlled by generators parameters, captive power plant are generally trying to meet their committed power injection but it leads to uncontrolled injection varying beyond the ceiling limit of gaming provision mentioned in Intra State ABT order.

In view of above, it is not advisable to apply ceiling provision of gaming to such captive power plant for declaring injection as "Gaming ". The Gaming is to be decided by SLDC at their own discretion and empowered to take decision on it. Therefore, it is decided that such captive power plant injecting surplus power in uncontrolled manner will not be treated as gaming but restricted to ceiling limit of 105 % in each block and 101 % over a day. Since declaration is equivalent to schedule of generating station, the energy over injected within the ceiling limit will be calculated on the basis of schedule energy.

1. OIL AND NATURAL GAS CORPORATION LTD. ANKLESHWAR (ONGC(A)):



CPP ONGC-A

UNIT NO.	INSTALLED CAPACITY	CONTRACT CAPACITY
1	34.5	12.72
TOTAL	34.5	12.72

A. METERING ARRANGEMENT:

Sr. No.	Type	Quantity
1	Main	2
2	Check	0
3	Stand By	0
	Total	2

Meters are installed at outgoing line of ONGC(A) for measurement of power injection into the grid.

In order to ensure the correctness of energy recorded in meter data, the data recorded at injecting end and receiving end of GETCO substation will be used.

B. SCHEDULING ARRANGEMENT :

Pool losses of Intra State Transmission Network: **1 % (estimated by SLDC)**

Ex-bus Availability declaration of ONGC (A) in one block = **DC_{(ONGC(A))}**

Net ex-bus Injection Schedule of ONGC (A) (in one block) = **SDL_{(ONGC(A))}**

Let the beneficiaries of wheeling transactions = wb1, wb2

Wheeling Transaction:

ONGC(A) is wheeling 12.72 MW capacity to their own companies, scheduling of such transaction will have to submit on day ahead basis by injecting companies.

Let us assume that aggregate wheeling schedule is ,

$$SDL(wb) = SDL(wb1)+SDL(wb2)+.....(a)$$

Schedule at ex-bus of ONGC(A) will be as

$SDL_{(ONGC-A)} = SDL(w)$at injecting end

Schedule at notional periphery of distribution licensee will be as.....

$SDL(wb) = (SDL(w)) - (\text{pool losses}) \times ((SDL(w))$at p/p of distribution licensee

Note : This schedule will be added in consolidate schedule of respective distribution licensee where receiving entity is located. If wheeling and open access transactions are located in more than one distribution licensee, the proportionate schedule will be added, but pool losses will remain unchanged.

Schedule at physical periphery of receiving entity will be as.....

$SDL(wb) = (SDL(w)) - (\text{transmission losses}) \times ((SDL(w))$

Where, Pool losses = Weekly estimated by SLDC
 Transmission losses = Monthly estimated by SLDC

Note : This schedule will have to prepare by respective distribution licensee by adjustment of transmission losses (declared by SLDC) to the schedule already received by them in consolidated format from SLDC. This schedule will have to used by distribution licensee for the purpose of energy accounting and adjusting credit of wheeling or open access transaction as the case may be.

C. ENERGY SENT OUT (ESO) OF ONGC(A) : The net ex-bus energy sent out from the generating station will be calculated as summation of net energy metered by SEM installed for each 15 minute block :

$$ESO_{(ONGC-A)} = \Sigma [OG (Wagra-1) + OG (Wagra-2)] \dots\dots\dots(ii)$$

Where OG(Wagra-1)= MWH reading of main meter of 66KV Wagra line no.1

OG(Wagra-2)= MWH reading of main meter of 66KV Wagra line no.2

D. UNSCHEDULED INTERCHANGE OF ENERGY (UI(ONGC-A)): The net unscheduled interchange energy of ONGC-A generating station will be calculated as difference between schedule energy and energy sent out for each 15 minute block.

$$UI_{(ongc-A)} = ((SDL_{(ONGC-A)}) - (ESO_{(ONGC-A)})) \dots \text{as per equation (i)-(ii)} \dots(iii)$$

If,

(i) Injection of ONGC(A) is less than Schedule, $UI_{(ONGC-A)}$ will be negative and ONGC(A) will be payable for compensating under injection in that respective 15 minute block.

- (ii) Injection of ONGC(A) is higher than Schedule, $UI_{(ONGC-A)}$ will be positive and ONGC(A) will be receivable for compensating over injection in that respective 15 minute block.

E. SETTLEMENT OF ENERGY CHARGES WITH (ONGC-A): The energy for calculation of energy charges will be calculated as under :

Scheduled Energy at ex-bus P/P of ONGC-A:-

$$= \sum_{i=1}^{96} (SDL(w) + SDL(o)) \text{ (in mwh) } \dots$$

Where $i = 1$ to 96 block

$SDL(w)$ = Wheeling schedule at ex bus P/P

$SDL(o)$ = Open Access schedule at ex-bus P/P

ONGC(A) will be paid by beneficiaries receiving energy from ONGC-A either through their wheeling arrangement or short term or long term open access. The scheduled energy of ONGC-A will be incorporated into State Energy Account (SEA) with bifurcation of beneficiaries. The ONGC-A and beneficiaries have to settle energy as per Statement of SEA.

F. APPLICABILITY OF GAMING TO CAPTIVE POWER PLANT : ONGC(A) is captive power plant whose fixed cost is not fully borne by beneficiaries and injecting surplus power into grid after their own consumption. Therefore, provision 14(ii) of Open Access Regulation 2005 will be applicable as ceiling limit.

Procedure of energy accounting in the event of exceeding limit of 105% in a block :

*If, $ESO_{(ONGC-A)} > 1.05 \times SDL_{(ONGC-A)}$ in a block (energy in mwh),
Injection beyond ceiling limit will be $(ESO_{(ONGC-A)} - 1.05 \times SDL_{(ONGC-A)})$*

Therefore, $ESO_{(ONGC-A)}$ will be revised in that particular block as....

$$RV-ESO_{(ONGC-A)} = 1.05 \times SDL_{(ONGC-A)}$$

Procedure of energy accounting in the event of exceeding limit of 101% in a block :

*If, $ESO_{(ONGC-A)} > 1.01 \times SDL_{(ONGC-A)}$, in a day (energy in mwh)
Injection beyond ceiling limit will be $(ESO_{(ONGC-A)} - 1.01 \times SDL_{(ONGC-A)})$*

Therefore, $ESO_{(ONGC-A)}$ will be revised for a whole day as....

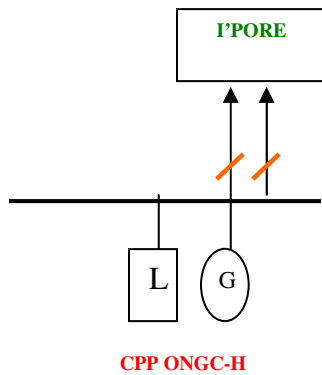
$$RV-ESO_{(ONGC-A)} = 1.01 \times SDL_{(ONGC-A)}$$

Reduction of excess energy injected by ONGC (A) will be carried out as under by identifying blocks as under :

If all 96 blocks have exceeds the limit of 101 %, the excess energy will be reduced by average of all 96 blocks for whole day. The treatment of 105% will be ignored in such case. .

If some of the blocks in a day say 34 blocks (generally more than 6 blocks in continuous) have consistently over injected beyond prescribed limit, the excess energy of such blocks will be reduced proportionately.

2. OIL AND NATURAL GAS CORPORATION LTD. HAZIRA (ONGC(H)):



UNIT NO.	INSTALLED CAPACITY	CONTRACT CAPACITY
1	48.5	14
TOTAL	48.5	14

A. METERING ARRANGEMENT:

Sr. No.	Type	Quantity
1	Main	2
2	Check	0
3	Stand By	0
	Total	2

Meters are installed at outgoing line of ONGC(H) for measurement of power injection into the grid.

In order to ensure the correctness of energy recorded in meter data, the data recorded at injecting end and receiving end of GETCO substation will be used.

B. SCHEDULING ARRANGEMENT :

Pool losses of Intra State Transmission Network: *1 % (estimated by SLDC)*

Ex-bus Availability declaration of ONGC (H) in one block = **DC** _{(ONGC(H))}

Net ex-bus Injection Schedule of ONGC (H) (in one block) = **SDL** _{(ONGC(H))}

Let the beneficiaries of wheeling transactions = wb1, wb2

Wheeling Transaction:

ONGC(H) is wheeling 14 MW capacity to their own companies, scheduling of such transaction will have to submit on day ahead basis by injecting companies.

Let us assume that aggregate wheeling schedule is,

$$SDL(wb) = SDL(wb1)+SDL(wb2)+.....(a)$$

Schedule at ex-bus of ONGC(H) will be as

$$SDL (ONGC-H) = SDL(w).....at injecting end$$

Schedule at notional periphery of distribution licensee will be as.....

$$SDL(wb) = (SDL(w)) - (pool losses) \times ((SDL(w)).....at p/p of distribution licensee$$

Note: This schedule will be added in consolidate schedule of respective distribution licensee where receiving entity is located. If wheeling and open access transactions are located in more than one distribution licensee, the proportionate schedule will be added, but pool losses will remain unchanged.

Schedule at physical periphery of receiving entity will be as.....

$$SDL(wb) = (SDL(w)) - (transmission losses) \times ((SDL(w))$$

Where, Pool losses = Weekly estimated by SLDC
 Transmission losses = Monthly estimated by SLDC

Note : This schedule will have to prepare by respective distribution licensee by adjustment of transmission losses (declared by SLDC) to the schedule already received by them in consolidated format from SLDC. This schedule will have to used by distribution licensee for the purpose of energy accounting and adjusting credit of wheeling or open access transaction as the case may be.

- C. ENERGY SENT OUT (ESO) OF ONGC(H) :** The net ex-bus energy sent out from the generating station will be calculated as summation of net energy metered by SEM installed for each 15 minute block :

$$ESO (ONGC-A) = \Sigma [OG (Hazira-1) + OG (Hazira-2)].....(ii)$$

Where OG(Hazira -1)= MWH reading of main meter of 66KV Hazira line no.1

OG(Hazira -2)= MWH reading of main meter of 66KV Hazira line no.2

- D. UNSCHEDULED INTERCHANGE OF ENERGY (UI(ONGC-H)):** The net unscheduled interchange energy of ONGC-H generating station will be calculated as difference between schedule energy and energy sent out for each 15 minute block.

$$UI(ONGC-H) = ((SDL_{(ONGC-H)}) - (ESO_{(ONGC-H)})) \dots \text{as per equation (i)-(ii)...(iii)}$$

If,

- i) Injection of ONGC (H) is less than Schedule, $UI_{(ONGC-H)}$ will be negative and ONGC(H) will be payable for compensating under injection in that respective 15 minute block.
 - ii) Injection of ONGC (H) is higher than Schedule, $UI_{(ONGC-H)}$ will be positive and ONGC(H) will be receivable for compensating over injection in that respective 15 minute block.
- E. SETTLEMENT OF ENERGY CHARGES WITH (ONGC-H)):** The energy for calculation of energy charges will be calculated as under :

Scheduled Energy at ex-bus P/P of ONGC-H:-

$$= \sum_{i=1}^{96} (SDL(w)(\text{in mwh}) \dots$$

Where $i = 1$ to 96 block

$SDL(w)$ = Wheeling schedule at ex bus P/P

ONGC(H) will be paid by beneficiaries receiving energy from ONGC-H either through their wheeling arrangement or short term or long term open access. The scheduled energy of ONGC-H will be incorporated into State Energy Account (SEA) with bifurcation of beneficiaries. The ONGC-H and beneficiaries have to settle energy as per Statement of SEA.

- F. APPLICABILITY OF GAMING TO CAPTIVE POWER PLANT :** ONGC(H) is captive power plant whose fixed cost is not fully borne by beneficiaries and injecting surplus power into grid after their own consumption. Therefore, provision 14(ii) of Open Access Regulation 2005 will be applicable as ceiling limit.

Procedure of energy accounting in the event of exceeding limit of 105% in a block :

*If, $ESO_{(ONGC-H)} > 1.05 \times SDL_{(ONGC-H)}$ in a block (energy in mwh),
Injection beyond ceiling limit will be $(ESO_{(ONGC-H)} - 1.05 \times SDL_{(ONGC-H)})$*

*Therefore, $ESO_{(ONGC-H)}$ will be revised in that particular block as....
 $RV-ESO_{(ONGC-A)} = 1.05 \times SDL_{(ONGC-H)}$*

Procedure of energy accounting in the event of exceeding limit of 101% in a block :

*If, $ESO_{(ONGC-H)} > 1.01 \times SDL_{(ONGC-H)}$, in a day (energy in mwh)
Injection beyond ceiling limit will be $(ESO_{(ONGC-H)} - 1.01 \times SDL_{(ONGC-H)})$*

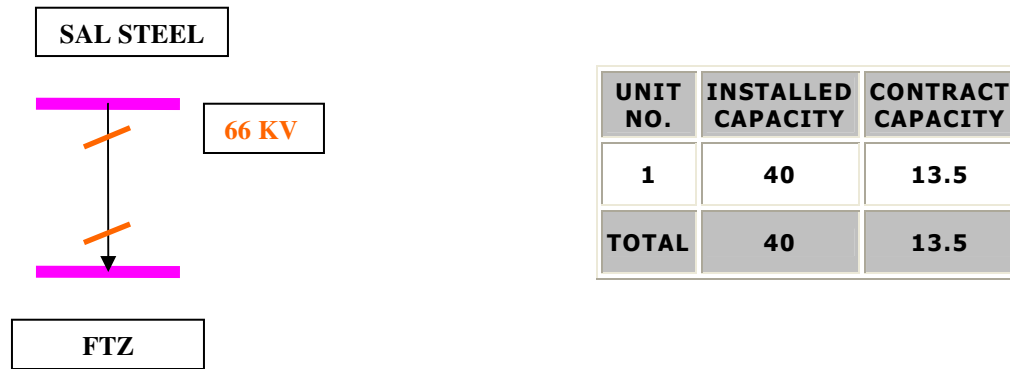
*Therefore, $ESO_{(ONGC-H)}$ will be revised for a whole day as....
 $RV-ESO_{(ONGC-H)} = 1.01 \times SDL_{(ONGC-H)}$*

Reduction of excess energy injected by ONGC (H) will be carried out as under by identifying blocks as under :

If all 96 blocks have exceeds the limit of 101 %, the excess energy will be reduced by average of all 96 blocks for whole day. The treatment of 105% will be ignored in such case. .

If some of the blocks in a day say 34 blocks (generally more than 6 blocks in continuous) have consistently over injected beyond prescribed limit, the excess energy of such blocks will be reduced proportionately.

3. SAL STEEL:



A. METERING ARRANGEMENT:

Sr. No.	Type	Quantity
1	Main	1
2	Check	0
3	Stand By	0
	Total	1

Meters are installed at outgoing line of SAL STEEL for measurement of power injection into the grid.

In order to ensure the correctness of energy recorded in meter data, the data recorded at injecting end and receiving end of GETCO substation will be used.

B. SCHEDULING ARRANGEMENT :

Pool losses of Intra State Transmission Network: *1 % (estimated by SLDC)*
 Ex-bus Availability declaration of SAL STEEL in one block = **DC** *(SAL STEEL)*
 Net ex-bus Injection Schedule of SAL STEEL (in one block) = **SDL** *(SAL STEEL)*
 Let the beneficiaries of wheeling transactions = wb1, wb2
 Let the beneficiaries of open access transactions = ob1, ob2

Wheeling Transaction:

SAL STEEL is wheeling 14 MW capacity to their own companies, scheduling of such transaction will have to submit on day ahead basis by injecting companies.

Let us assume that aggregate wheeling schedule is,

$$SDL(wb) = SDL(wb1) + SDL(wb2) + \dots \text{(if only wheeling)} \text{_____ (a)}$$

$$SDL(ob) = SDL(ob1) + SDL(ob2) + \dots \text{(if open access transaction)} \text{_____ (b)}$$

Schedule at ex-bus of SAL will be as

$$SDL_{(SAL)} = SDL(w) + SDL(ob) \dots \text{at injecting end}$$

Schedule at notional periphery of distribution licensee will be as.....

$SDL(wb) = (SDL(w)) - (\text{pool losses}) \times ((SDL(w)) \dots \dots \text{at p/p of distribution licensee}$

$SDL(ongc(ob)) = (SDL(o)) - (\text{pool losses}) \times ((SDL(o)) \dots \dots \text{at p/p of distribution licensee}$

Note: This schedule will be added in consolidate schedule of respective distribution licensee where receiving entity is located. If wheeling and open access transactions are located in more than one distribution licensee, the proportionate schedule will be added, but pool losses will remain unchanged.

Schedule at physical periphery of receiving entity will be as.....

$SDL(wb) = (SDL(w)) - (\text{transmission losses}) \times ((SDL(w))$

$SDL(ongc(ob)) = (SDL(o)) - (\text{transmission losses}) \times ((SDL(o)) \dots \dots$

Where, Pool losses = Weekly estimated by SLDC
 Transmission losses = Monthly estimated by SLDC

Note : This schedule will have to prepare by respective distribution licensee by adjustment of transmission losses (declared by SLDC) to the schedule already received by them in consolidated format from SLDC. This schedule will have to used by distribution licensee for the purpose of energy accounting and adjusting credit of wheeling or open access transaction as the case may be.

C. ENERGY SENT OUT (ESO) OF SAL STEEL : The net ex-bus energy sent out from the generating station will be calculated as summation of net energy metered by SEM installed for each 15 minute block :

$$ESO_{(SAL)} = \Sigma [OG (FTZ-1)] \dots \dots \dots (ii)$$

Where $OG(FTZ -1)$ = MWH reading of main meter of 66KV FTZ line no.1

D. UNSCHEDULED INTERCHANGE OF ENERGY (UI(SAL STEEL)): The net unscheduled interchange energy of SAL STEEL generating station will be calculated as difference between schedule energy and energy sent out for each 15 minute block.

$$UI (SAL) = ((SDL_{(SAL)}) - (ESO_{(SAL)})) \dots \text{as per equation (i)-(ii)} \dots (iii)$$

If,

- (i) Injection of SAL STEEL is less than Schedule, $UI_{(SAL)}$ will be negative and SAL STEEL will be payable for compensating under injection in that respective 15 minute block.

- (ii) Injection of SAL STEEL is higher than Schedule, $UI_{(SAL)}$ will be positive and SAL STEEL will be receivable for compensating over injection in that respective 15 minute block.

E. SETTLEMENT OF ENERGY CHARGES WITH (SAL STEEL): The energy for calculation of energy charges will be calculated as under :

Scheduled Energy at ex-bus P/P of SAL STEEL:-

$$= \sum_{i=1}^{96} (SDL(w)) \text{ (in mwh) } \dots$$

Where $i = 1$ to 96 block

$SDL(w)$ = Wheeling schedule at ex bus P/P

SAL STEEL will be paid by beneficiaries receiving energy from SAL STEEL either through their wheeling arrangement or short term or long term open access. The scheduled energy of SAL STEEL will be incorporated into State Energy Account (SEA) with bifurcation of beneficiaries. The SAL STEEL and beneficiaries have to settle energy as per Statement of SEA.

F. APPLICABILITY OF GAMING TO CAPTIVE POWER PLANT : SAL STEEL is captive power plant whose fixed cost is not fully borne by beneficiaries and injecting surplus power into grid after their own consumption. Therefore, provision 14(ii) of Open Access Regulation 2005 will be applicable as ceiling limit.

Procedure of energy accounting in the event of exceeding limit of 105% in a block :

*If, $ESO_{(SAL)} > 1.05 \times SDL_{(SAL)}$ in a block (energy in mwh),
Injection beyond ceiling limit will be $(ESO_{(SAL)} - 1.05 \times SDL_{(SAL)})$*

Therefore, $ESO_{(SAL)}$ will be revised in that particular block as....

$$RV-ESO_{(SAL)} = 1.05 \times SDL_{(SAL)}$$

Procedure of energy accounting in the event of exceeding limit of 101% in a block:

*If, $ESO_{(SAL)} > 1.01 \times SDL_{(SAL)}$, in a day (energy in mwh)
Injection beyond ceiling limit will be $(ESO_{(SAL)} - 1.01 \times SDL_{(SAL)})$*

Therefore, $ESO_{(SAL)}$ will be revised for a whole day as....

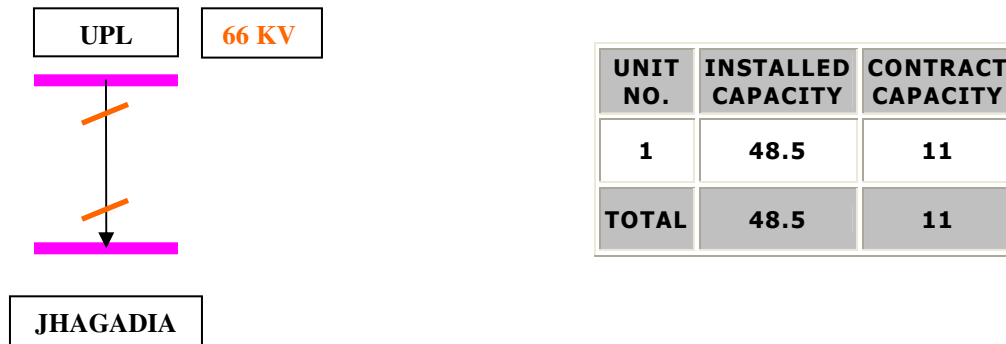
$$RV-ESO_{(SAL)} = 1.01 \times SDL_{(SAL)}$$

Reduction of excess energy injected by SAL STEEL) will be carried out as under by identifying blocks as under:

If all 96 blocks have exceeds the limit of 101 %, the excess energy will be reduced by average of all 96 blocks for whole day. The treatment of 105% will be ignored in such case. .

If some of the blocks in a day say 34 blocks (generally more than 6 blocks in continuous) have consistently over injected beyond prescribed limit, the excess energy of such blocks will be reduced proportionately.

4. UNITED PHOSPHOROUS LIMITED:



A. METERING ARRANGEMENT:

Sr. No.	Type	Quantity
1	Main	1
2	Check	0
3	Stand By	0
	Total	1

Meters are installed at outgoing line of UPL for measurement of power injection into the grid.

In order to ensure the correctness of energy recorded in meter data, the data recorded at injecting end and receiving end of GETCO substation will be used.

B. SCHEDULING ARRANGEMENT :

Pool losses of Intra State Transmission Network: **1 % (estimated by SLDC)**

Ex-bus Availability declaration of UPL in one block = **DC_(UPL)**

Net ex-bus Injection Schedule of UPL (in one block) = **SDL_(UPL)**

Let the beneficiaries of wheeling transactions = wb1, wb2

Let the beneficiaries of open access transactions = ob1, ob2

Wheeling Transaction:

UPL is wheeling 14 MW capacity to their own companies, scheduling of such transaction will have to submit on day ahead basis by injecting companies.

Let us assume that aggregate wheeling schedule is,

$$SDL(wb) = SDL(wb1)+SDL(wb2)+.....(a)$$

Schedule at ex-bus of UPL will be as

$$SDL_{(SAL)} = SDL(w).....at\ injecting\ end$$

Schedule at notional periphery of distribution licensee will be as.....

$$SDL(wb) = (SDL(w) - (pool\ losses) \times (SDL(w)).....at\ p/p\ of\ distribution\ licensee$$

Note: This schedule will be added in consolidate schedule of respective distribution licensee where receiving entity is located. If wheeling and open access transactions are located in more than one distribution licensee, the proportionate schedule will be added, but pool losses will remain unchanged.

Schedule at physical periphery of receiving entity will be as.....

$$SDL(wb) = (SDL(w) - (transmission\ losses) \times (SDL(w))$$

Where, Pool losses = Weekly estimated by SLDC
 Transmission losses = Monthly estimated by SLDC

Note : This schedule will have to prepare by respective distribution licensee by adjustment of transmission losses (declared by SLDC) to the schedule already received by them in consolidated format from SLDC. This schedule will have to used by distribution licensee for the purpose of energy accounting and adjusting credit of wheeling or open access transaction as the case may be.

C. ENERGY SENT OUT (ESO) OF UPL : The net ex-bus energy sent out from the generating station will be calculated as summation of net energy metered by SEM installed for each 15 minute block :

$$ESO_{(UPL)} = \sum [OG (Jhagadia-1)].....(ii)$$

Where OG(Jhagadia -1)= MWH reading of main meter of 66KV Jhagadia line no.1

D. UNSCHEDULED INTERCHANGE OF ENERGY (UI(UPL)): The net unscheduled interchange energy of UPL generating station will be calculated as difference between schedule energy and energy sent out for each 15 minute block.

$$UI (UPL) = ((SDL_{(UPL)}) - (ESO_{(UPL)})) \dots as\ per\ equation\ (i)-(ii)....(iii)$$

If,

- (i) Injection of UPL is less than Schedule, $UI_{(UPL)}$ will be negative and UPL will be payable for compensating under injection in that respective 15 minute block.
- (ii) Injection of UPL is higher than Schedule, $UI_{(UPL)}$ will be positive and UPL will be receivable for compensating over injection in that respective 15 minute block.

E. SETTLEMENT OF ENERGY CHARGES WITH (UPL): The energy for calculation of energy charges will be calculated as under :

Scheduled Energy at ex-bus P/P of UPL:-

$$= \sum_{i=1}^{96} (SDL(w)) \text{ (in mwh) } \dots$$

Where $i = 1$ to 96 block

$SDL(w)$ = Wheeling schedule at ex bus P/P

UPL will be paid by beneficiaries receiving energy from UPL either through their wheeling arrangement or short term or long term open access. The scheduled energy of UPL will be incorporated into State Energy Account (SEA) with bifurcation of beneficiaries. The UPL and beneficiaries have to settle energy as per Statement of SEA.

F. APPLICABILITY OF GAMING TO CAPTIVE POWER PLANT : UPL is captive power plant whose fixed cost is not fully borne by beneficiaries and injecting surplus power into grid after their own consumption. Therefore, provision 14(ii) of Open Access Regulation 2005 will be applicable as ceiling limit.

Procedure of energy accounting in the event of exceeding limit of 105% in a block :

*If, $ESO_{(UPL)} > 1.05 \times SDL_{(UPL)}$ in a block (energy in mwh),
Injection beyond ceiling limit will be $(ESO_{(UPL)} - 1.05 \times SDL_{(UPL)})$*

Therefore, $ESO_{(SAL)}$ will be revised in that particular block as....

$$RV-ESO_{(UPL)} = 1.05 \times SDL_{(UPL)}$$

Procedure of energy accounting in the event of exceeding limit of 101% in a block:

*If, $ESO_{(UPL)} > 1.01 \times SDL_{(UPL)}$, in a day (energy in mwh)
Injection beyond ceiling limit will be $(ESO_{(UPL)} - 1.01 \times SDL_{(UPL)})$*

Therefore, $ESO_{(UPL)}$ will be revised for a whole day as....

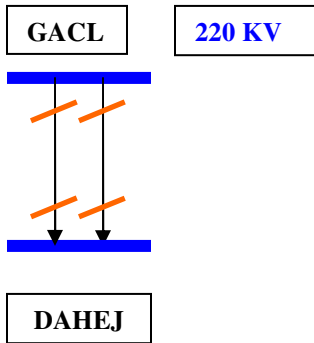
$$RV-ESO_{(UPL)} = 1.01 \times SDL_{(UPL)}$$

Reduction of excess energy injected by UPL will be carried out as under by identifying blocks as under:

If all 96 blocks have exceeds the limit of 101 %, the excess energy will be reduced by average of all 96 blocks for whole day. The treatment of 105% will be ignored in such case. .

If some of the blocks in a day say 34 blocks (generally more than 6 blocks in continuous) have consistently over injected beyond prescribed limit, the excess energy of such blocks will be reduced proportionately.

5. GACL-DAHEJ:



UNIT NO.	INSTALLED CAPACITY	CONTRACT CAPACITY
1	114	12
TOTAL	114	12

A. METERING ARRANGEMENT:

Sr. No.	Type	Quantity
1	Main	2
2	Check	0
3	Stand By	0
	Total	2

Meters are installed at outgoing line of GACL for measurement of power injection into the grid.

In order to ensure the correctness of energy recorded in meter data, the data recorded at injecting end and receiving end of GETCO substation will be used.

B. SCHEDULING ARRANGEMENT :

Pool losses of Intra State Transmission Network: **1 % (estimated by SLDC)**

Ex-bus Availability declaration of GACL in one block = **DC** _(GACL)

Net ex-bus Injection Schedule of GACL (in one block) = **SDL** _(GACL)

Let the beneficiaries of wheeling transactions = wb1, wb2

Let the beneficiaries of open access transactions = ob1, ob2

Wheeling Transaction:

GACL is wheeling 12 MW capacity to their own companies, scheduling of such transaction will have to submit on day ahead basis by injecting companies.

Let us assume that aggregate wheeling schedule is,

$$SDL(wb) = SDL(wb1)+SDL(wb2)+.....(a)$$

Schedule at ex-bus of GACL will be as

$$SDL_{(SAL)} = SDL(w).....at\ injecting\ end$$

Schedule at notional periphery of distribution licensee will be as.....

$$SDL(wb) = (SDL(w)) - (pool\ losses) \times ((SDL(w)).....at\ p/p\ of\ distribution\ licensee$$

Note: This schedule will be added in consolidate schedule of respective distribution licensee where receiving entity is located. If wheeling and open access transactions are located in more than one distribution licensee, the proportionate schedule will be added, but pool losses will remain unchanged.

Schedule at physical periphery of receiving entity will be as.....

$$SDL(wb) = (SDL(w)) - (transmission\ losses) \times ((SDL(w))$$

Where, Pool losses = Weekly estimated by SLDC
 Transmission losses = Monthly estimated by SLDC

Note : This schedule will have to prepare by respective distribution licensee by adjustment of transmission losses (declared by SLDC) to the schedule already received by them in consolidated format from SLDC. This schedule will have to used by distribution licensee for the purpose of energy accounting and adjusting credit of wheeling or open access transaction as the case may be.

C. ENERGY SENT OUT (ESO) OF GACL : The net ex-bus energy sent out from the generating station will be calculated as summation of net energy metered by SEM installed for each 15 minute block :

$$ESO_{(GACL)} = \Sigma [OG (Dahej-1)+ OG(Dahej-2)]......(ii)$$

Where $OG(Dahej -1)$ = MWH reading of main meter of 220KV *Dahej* line no.1

$OG(Dahej -1)$ = MWH reading of main meter of 220KV *Dahej* line no.2

D. UNSCHEDULED INTERCHANGE OF ENERGY (UI(GACL)): The net unscheduled interchange energy of GACL generating station will be calculated as difference between schedule energy and energy sent out for each 15 minute block.

$$UI (GACL) = ((SDL_{(GACL)}) - (ESO_{(GACL)})) \dots \text{as per equation (i)-(ii)...(iii)}$$

If,

- (i) Injection of GACL is less than Schedule, $UI_{(GACL)}$ will be negative and GACL will be payable for compensating under injection in that respective 15 minute block.
- (ii) Injection of GACL is higher than Schedule, $UI_{(GACL)}$ will be positive and GACL will be receivable for compensating over injection in that respective 15 minute block.

E. SETTLEMENT OF ENERGY CHARGES WITH (GACL): The energy for calculation of energy charges will be calculated as under :

Scheduled Energy at ex-bus P/P of GACL:-

$$= \sum_{i=1}^{96} (SDL(w)) \text{ (in mwh) } \dots$$

Where $i = 1$ to 96 block

$SDL(w)$ = Wheeling schedule at ex bus P/P

GACL will be paid by beneficiaries receiving energy from GACL either through their wheeling arrangement or short term or long term open access. The scheduled energy of GACL will be incorporated into State Energy Account (SEA) with bifurcation of beneficiaries. The GACL and beneficiaries have to settle energy as per Statement of SEA.

F. APPLICABILITY OF GAMING TO CAPTIVE POWER PLANT : GACL is captive power plant whose fixed cost is not fully borne by beneficiaries and injecting surplus power into grid after their own consumption. Therefore, provision 14(ii) of Open Access Regulation 2005 will be applicable as ceiling limit.

Procedure of energy accounting in the event of exceeding limit of 105% in a block :

*If, $ESO_{(GACL)} > 1.05 \times SDL_{(GACL)}$ in a block (energy in mwh),
Injection beyond ceiling limit will be $(ESO_{(GACL)} - 1.05 \times SDL_{(GACL)})$*

Therefore, $ESO_{(SAL)}$ will be revised in that particular block as....

$$RV-ESO_{(GACL)} = 1.05 \times SDL_{(GACL)}$$

Procedure of energy accounting in the event of exceeding limit of 101% in a block:

*If, $ESO_{(UPL)} > 1.01 \times SDL_{(GACL)}$, in a day (energy in mwh)
Injection beyond ceiling limit will be $(ESO_{(GACL)} - 1.01 \times SDL_{(GACL)})$*

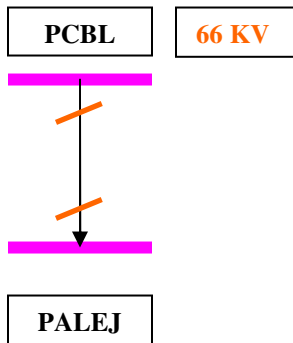
Therefore, $ESO_{(UPL)}$ will be revised for a whole day as....
 $RV-ESO_{(GACL)} = 1.01 \times SDL_{(GACL)}$

Reduction of excess energy injected by GACL will be carried out as under by identifying blocks as under:

If all 96 blocks have exceeds the limit of 101 %, the excess energy will be reduced by average of all 96 blocks for whole day. The treatment of 105% will be ignored in such case. .

If some of the blocks in a day say 34 blocks (generally more than 6 blocks in continuous) have consistently over injected beyond prescribed limit, the excess energy of such blocks will be reduced proportionately.

6. PCBL-PALEJ:



UNIT NO.	INSTALLED CAPACITY	CONTRACT CAPACITY
1	12	8.6
TOTAL	12	8.6

A. METERING ARRANGEMENT:

Sr. No.	Type	Quantity
1	Main	1
2	Check	0
3	Stand By	0

Meters are installed at outgoing line of PCBL for measurement of power injection into the grid.

In order to ensure the correctness of energy recorded in meter data, the data recorded at injecting end and receiving end of GETCO substation will be used.

	Total	1
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B. SCHEDULING ARRANGEMENT :

Pool losses of Intra State Transmission Network: *1 % (estimated by SLDC)*

Ex-bus Availability declaration of PCBL in one block = **DC** *(PCBL)*

Net ex-bus Injection Schedule of PCBL (in one block) = **SDL** *(PCBL)*

Let the beneficiaries of open access transactions = ob1, ob2

Open Access Transaction (to third party through Inter State Transactions)

PCBL is supplying power to trading agency through short term contract for 8.6 MW, the day ahead/ same day schedule submitted by PCBL and finalized by SLDC by adjusting pool losses. The revision in such schedule will be carried out as per the open access regulation issued by appropriate commission.

Let us assume that $SDL(ob) = SDL(ob1) + SDL(ob2) + \dots$ (b)

Schedule at ex-bus of PCBL will be as

$SDL(PCBL) = SDL(o)$at injecting end

Schedule at periphery of Gujarat State will be as.....

$SDL(PCBL) = (SDL(o) - (Transmission\ losses) \times (SDL(o)))$at p/p of Gujarat State

C. ENERGY SENT OUT (ESO) OF PCBL : The net ex-bus energy sent out from the generating station will be calculated as summation of net energy metered by SEM installed for each 15 minute block :

$$ESO_{(PCBL)} = \sum [OG(Palej-1)] \dots \dots \dots (ii)$$

Where $OG(Palej-1)$ = MWH reading of main meter of 66KV Palej line no.1

D. UNSCHEDULED INTERCHANGE OF ENERGY (UI(PCBL)): The net unscheduled interchange energy of PCBL generating station will be calculated as difference between schedule energy and energy sent out for each 15 minute block.

$$UI(PCBL) = ((SDL_{(PCBL)} - ESO_{(PCBL)}) \dots \text{as per equation (i)-(ii)} \dots (iii)$$

If,

- (i) Injection of PCBL is less than Schedule, UI(PCBL) will be negative and PCBL will be payable for compensating under injection in that respective 15 minute block.

- (ii) Injection of PCBL is higher than Schedule, UI(PCBL) will be positive and PCBL will be receivable for compensating over injection in that respective 15 minute block.

E. SETTLEMENT OF ENERGY CHARGES WITH (PCBL): The energy for calculation of energy charges will be calculated as under :

Scheduled Energy at ex-bus P/P of PCBL:-

$$= \sum_{i=1}^{96} (\text{SDL}(w) + \text{SDL}(o)) \text{ (in mwh) } \dots$$

Where i= 1 to 96 block

SDL(w) = Wheeling schedule at ex bus P/P

SDL(o) = Open Access schedule at ex-bus P/P

PCBL will be paid by beneficiaries receiving energy from PCBL either through their wheeling arrangement or short term or long term open access. The scheduled energy of PCBL will be incorporated into State Energy Account (SEA) with bifurcation of beneficiaries. The PCBL and beneficiaries have to settle energy as per Statement of SEA.

F. APPLICABILITY OF GAMING TO CAPTIVE POWER PLANT: PCBL is captive power plant whose fixed cost is not fully borne by beneficiaries and injecting surplus power into grid after their own consumption. Therefore, provision 14(ii) of Open Access Regulation 2005 will be applicable as ceiling limit.

Procedure of energy accounting in the event of exceeding limit of 105% in a block:

*If, $ESO_{(PCBL)} > 1.05 \times SDL_{(PCBL)}$ in a block (energy in mwh),
Injection beyond ceiling limit will be $(ESO_{(PCBL)} - 1.05 \times SDL_{(PCBL)})$*

Therefore, $ESO_{(PCBL)}$ will be revised in that particular block as....

$$RV-ESO_{(PCBL)} = 1.05 \times SDL_{(PCBL)}$$

Procedure of energy accounting in the event of exceeding limit of 101% in a block :

*If, $ESO_{(PCBL)} > 1.01 \times SDL_{(PCBL)}$, in a day (energy in mwh)
Injection beyond ceiling limit will be $(ESO_{(PCBL)} - 1.01 \times SDL_{(PCBL)})$*

Therefore, $ESO_{(PCBL)}$ will be revised for a whole day as....

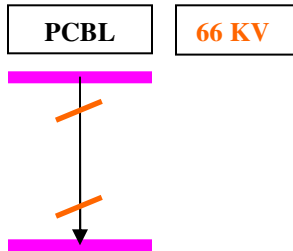
$$RV-ESO_{(PCBL)} = 1.01 \times SDL_{(PCBL)}$$

Reduction of excess energy injected by PCBL will be carried out as under by identifying blocks as under :

If all 96 blocks have exceeds the limit of 101 %, the excess energy will be reduced by average of all 96 blocks for whole day. The treatment of 105% will be ignored in such case. .

If some of the blocks in a day say 34 blocks (generally more than 6 blocks in continuous) have consistently over injected beyond prescribed limit, the excess energy of such blocks will be reduced proportionately.

7. PCBL-MOKHA:



UNIT NO.	INSTALLED CAPACITY	CONTRACT CAPACITY
1		10
TOTAL		10

MOKHA

A. METERING ARRANGEMENT:

Sr. No.	Type	Quantity
1	Main	1
2	Check	0
3	Stand By	0
	Total	1

Meters are installed at outgoing line of PCBL for measurement of power injection into the grid.

In order to ensure the correctness of energy recorded in meter data, the data recorded at injecting end and receiving end of GETCO substation will be used.

B. SCHEDULING ARRANGEMENT :

Pool losses of Intra State Transmission Network: **1 % (estimated by SLDC)**

Ex-bus Availability declaration of PCBL in one block = **DC (PCBL)**

Net ex-bus Injection Schedule of PCBL (in one block) = **SDL (PCBL)**

Let the beneficiaries of open access transactions = ob1, ob2

Open Access Transaction (to third party through Inter State Transactions)

PCBL is supplying power to trading agency through short term contract for 8.6 MW, the day ahead/ same day schedule submitted by PCBL and finalized by

SLDC by adjusting pool losses. The revision in such schedule will be carried out as per the open access regulation issued by appropriate commission.

Let us assume that $SDL(ob) = SDL(ob1) + SDL(ob2) + \dots$ (b)

Schedule at ex-bus of PCBL will be as

$SDL(PCBL) = SDL(o) \dots$ at injecting end

Schedule at periphery of Gujarat State will be as.....

$SDL(PCBL) = (SDL(o) - (Transmission\ losses) \times (SDL(o))) \dots$ at p/p of Gujarat State

- C. ENERGY SENT OUT (ESO) OF PCBL :** The net ex-bus energy sent out from the generating station will be calculated as summation of net energy metered by SEM installed for each 15 minute block :

$$ESO_{(PCBL)} = \sum [OG(Mokha-1)] \dots (ii)$$

Where $OG(Mokha-1)$ = MWH reading of main meter of 66KV Mokha line no.1

- D. UNSCHEDULED INTERCHANGE OF ENERGY (UI(PCBL)):** The net unscheduled interchange energy of PCBL generating station will be calculated as difference between schedule energy and energy sent out for each 15 minute block.

$$UI(PCBL) = ((SDL_{(PCBL)}) - (ESO_{(PCBL)})) \dots \text{as per equation (i)-(ii)} \dots (iii)$$

If,

- (i) Injection of PCBL is less than Schedule, UI(PCBL) will be negative and PCBL will be payable for compensating under injection in that respective 15 minute block.
- (ii) Injection of PCBL is higher than Schedule, UI(PCBL) will be positive and PCBL will be receivable for compensating over injection in that respective 15 minute block.

- E. SETTLEMENT OF ENERGY CHARGES WITH (PCBL):** The energy for calculation of energy charges will be calculated as under :

Scheduled Energy at ex-bus P/P of PCBL:-

$$= \sum_{i=1}^{96} (SDL(o)) \text{ (in mwh)} \dots$$

Where $i = 1$ to 96 block

SDL(o) = Open Access schedule at ex-bus P/P

PCBL will be paid by beneficiaries receiving energy from PCBL either through their wheeling arrangement or short term or long term open access. The scheduled energy of PCBL will be incorporated into State Energy Account (SEA) with bifurcation of beneficiaries. The PCBL and beneficiaries have to settle energy as per Statement of SEA.

F. APPLICABILITY OF GAMING TO CAPTIVE POWER PLANT: PCBL is captive power plant whose fixed cost is not fully borne by beneficiaries and injecting surplus power into grid after their own consumption. Therefore, provision 14(ii) of Open Access Regulation 2005 will be applicable as ceiling limit.

Procedure of energy accounting in the event of exceeding limit of 105% in a block :

*If, $ESO_{(PCBL)} > 1.05 \times SDL_{(PCBL)}$ in a block (energy in mwh),
Injection beyond ceiling limit will be $(ESO_{(PCBL)} - 1.05 \times SDL_{(PCBL)})$*

Therefore, $ESO_{(PCBL)}$ will be revised in that particular block as....

$$RV-ESO_{(PCBL)} = 1.05 \times SDL_{(PCBL)}$$

Procedure of energy accounting in the event of exceeding limit of 101% in a block :

*If, $ESO_{(PCBL)} > 1.01 \times SDL_{(PCBL)}$, in a day (energy in mwh)
Injection beyond ceiling limit will be $(ESO_{(PCBL)} - 1.01 \times SDL_{(PCBL)})$*

Therefore, $ESO_{(PCBL)}$ will be revised for a whole day as....

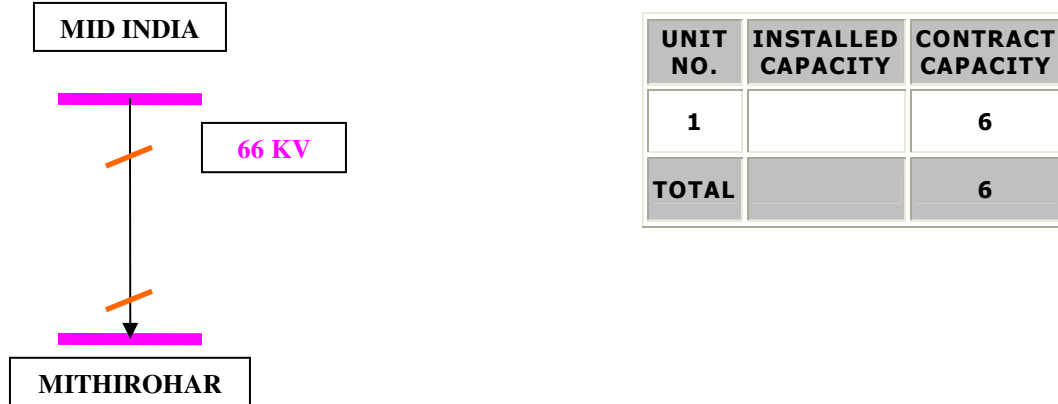
$$RV-ESO_{(PCBL)} = 1.01 \times SDL_{(PCBL)}$$

Reduction of excess energy injected by PCBL will be carried out as under by identifying blocks as under :

If all 96 blocks have exceeds the limit of 101 %, the excess energy will be reduced by average of all 96 blocks for whole day. The treatment of 105% will be ignored in such case. .

If some of the blocks in a day say 34 blocks (generally more than 6 blocks in continuous) have consistently over injected beyond prescribed limit, the excess energy of such blocks will be reduced proportionately.

8. MID INDIA:



A. METERING ARRANGEMENT:

Sr. No.	Type	Quantity
1	Main	1
2	Check	0
3	Stand By	0
	Total	1

Meters are installed at outgoing line of MID INDIA for measurement of power injection into the grid.

In order to ensure the correctness of energy recorded in meter data, the data recorded at injecting end and receiving end of GETCO substation will be used.

B. SCHEDULING ARRANGEMENT :

Pool losses of Intra State Transmission Network: **1 % (estimated by SLDC)**

Ex-bus Availability declaration of MID INDIA in one block = **DC** (MID IND)

Net ex-bus Injection Schedule of MID INDIA (in one block) = **SDL** (MID IND)

Let the beneficiaries of open access transactions = ob1, ob2

Open Access Transaction (to third party through Inter State Transactions)

MID INDIA is supplying power to trading agency through short term contract for 6 MW, the day ahead/ same day schedule submitted by MID INDIA and finalized by SLDC by adjusting pool losses. The revision in such schedule will be carried out as per the open access regulation issued by appropriate commission.

Let us assume that $SDL(ob) = SDL(ob1) + SDL(ob2) + \dots$ (b)

Schedule at ex-bus of MID INDIA will be as
 $SDL (MID INDIA) = SDL(o) \dots$ at injecting end

Schedule at periphery of Gujarat State will be as.....
 $SDL(MID INDIA) = (SDL(o)) - (Transmission losses) \times ((SDL(o))) \dots$ at p/p of Gujarat State

- C. ENERGY SENT OUT (ESO) OF MID INDIA :** The net ex-bus energy sent out from the generating station will be calculated as summation of net energy metered by SEM installed for each 15 minute block :

$$ESO_{(PCBL)} = \Sigma [OG (Mithirohar-1)].....(ii)$$

Where OG(Mithirohar-1)= MWH reading of main meter of 66KV Mithirohar line no.1

- D. UNSCHEDULED INTERCHANGE OF ENERGY (UI(MID INDIA)):** The net unscheduled interchange energy of MID INDIA generating station will be calculated as difference between schedule energy and energy sent out for each 15 minute block.

$$UI (MID INDIA)=((SDL_{(MID IND)})-(ESO_{(MID IND)})) \dots as per equation (i)-(ii)....(iii)$$

If,

- (i) Injection of MID INDIA is less than Schedule, UI(MID INDIA) will be negative and PCBL will be payable for compensating under injection in that respective 15 minute block.
- (ii) Injection of MID INDIA is higher than Schedule, UI(MID INDIA) will be positive and MID INDIA will be receivable for compensating over injection in that respective 15 minute block.

- E. SETTLEMENT OF ENERGY CHARGES WITH (MID INDIA):** The energy for calculation of energy charges will be calculated as under :

Scheduled Energy at ex-bus P/P of MID INDIA:-

$$= \sum_{i=1}^{96} (SDL(o))(in mwh)...$$

Where i= 1 to 96 block

SDL(o) = Open Access schedule at ex-bus P/P

MID INDIA will be paid by beneficiaries receiving energy from MID INDIA either through their wheeling arrangement or short term or long term open access. The scheduled energy of MID INDIA will be incorporated into State Energy Account (SEA) with bifurcation of beneficiaries. The MID INDIA and beneficiaries have to settle energy as per Statement of SEA.

- F. APPLICABILITY OF GAMING TO CAPTIVE POWER PLANT:** MID INDIA is captive power plant whose fixed cost is not fully borne by beneficiaries and injecting surplus power into grid after their own consumption. Therefore,

provision 14(ii) of Open Access Regulation 2005 will be applicable as ceiling limit.

Procedure of energy accounting in the event of exceeding limit of 105% in a block :

*If, $ESO_{(MID\ IND)} > 1.05 \times SDL_{(MID\ IND)}$ in a block (energy in mwh),
Injection beyond ceiling limit will be $(ESO_{(MID\ IND)} - 1.05 \times SDL_{(MID\ IND)})$*

Therefore, $ESO_{(MID\ IND)}$ will be revised in that particular block as....

$$RV-ESO_{(MID\ IND)} = 1.05 \times SDL_{(MID\ IND)}$$

Procedure of energy accounting in the event of exceeding limit of 101% in a block :

*If, $ESO_{(MID\ IND)} > 1.01 \times SDL_{(MID\ IND)}$, in a day (energy in mwh)
Injection beyond ceiling limit will be $(ESO_{(MID\ IND)} - 1.01 \times SDL_{(MID\ IND)})$*

Therefore, $ESO_{(MID\ IND)}$ will be revised for a whole day as....

$$RV-ESO_{(MID\ IND)} = 1.01 \times SDL_{(MID\ IND)}$$

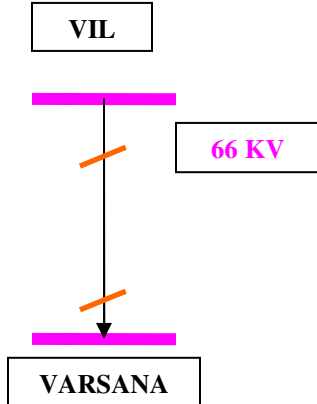
Reduction of excess energy injected by MID INDIA will be carried out as under by identifying blocks as under :

If all 96 blocks have exceeds the limit of 101 %, the excess energy will be reduced by average of all 96 blocks for whole day. The treatment of 105% will be ignored in such case. .

If some of the blocks in a day say 34 blocks (generally more than 6 blocks in continuous) have consistently over injected beyond prescribed limit, the excess energy of such blocks will be reduced proportionately.

9. VARSANA ISPAT LIMITED:

UNIT NO.	INSTALLED CAPACITY	CONTRACT CAPACITY
1		28
TOTAL		28



A. METERING ARRANGEMENT:

Sr. No.	Type	Quantity
1	Main	1
2	Check	0
3	Stand By	0
	Total	1

Meters are installed at outgoing line of VARSANA ISPAT for measurement of power injection into the grid.

In order to ensure the correctness of energy recorded in meter data, the data recorded at injecting end and receiving end of GETCO substation will be used.

B. SCHEDULING ARRANGEMENT :

Pool losses of Intra State Transmission Network: **1 % (estimated by SLDC)**
 Ex-bus Availability declaration of VARSANA ISPAT in one block = **DC_(VIL)**
 Net ex-bus Injection Schedule of VARSANA ISPAT (in one block) = **SDL_(VIL)**
 Let the beneficiaries of open access transactions = ob1, ob2

Open Access Transaction (to third party through Inter State Transactions)

VARSANA ISPAT is supplying power to trading agency through short term contract for 28 MW, the day ahead/ same day schedule submitted by VARSANA ISPAT and finalized by SLDC by adjusting pool losses. The revision in such schedule will be carried out as per the open access regulation issued by appropriate commission.

Let us assume that $SDL(ob) = SDL(ob1) + SDL(ob2) + \dots$ (b)

Schedule at ex-bus of VARSANA ISPAT will be as
 $SDL(VIL) = SDL(o) \dots$ at injecting end

Schedule at periphery of Gujarat State will be as.....
 $SDL(VIL) = (SDL(o) - (Transmission\ losses) \times (SDL(o))) \dots$ at p/p of Gujarat State

C. ENERGY SENT OUT (ESO) OF VARSANA ISPAT: The net ex-bus energy sent out from the generating station will be calculated as summation of net energy metered by SEM installed for each 15 minute block :

$$ESO_{(VIL)} = \Sigma [OG (Varsana-1)].....(ii)$$

Where OG(Varsana-1)= MWH reading of main meter of 66KV Varsana line no.1

D. UNSCHEDULED INTERCHANGE OF ENERGY (UI(VARSANA ISPAT)): The net unscheduled interchange energy of VARSANA ISPAT generating station will be calculated as difference between schedule energy and energy sent out for each 15 minute block.

$$UI (VIL)=(SDL_{(VIL)}-(ESO_{(VIL)})) \dots \text{as per equation (i)-(ii)}....(iii)$$

If,

- (i) Injection of VARSANA ISPAT is less than Schedule, UI(VIL) will be negative and VARSANA ISPAT will be payable for compensating under injection in that respective 15 minute block.
- (ii) Injection of VARSANA ISPAT is higher than Schedule, UI(VIL) will be positive and VARSANA ISPAT will be receivable for compensating over injection in that respective 15 minute block.

E. SETTLEMENT OF ENERGY CHARGES WITH (VARSANA ISPAT): The energy for calculation of energy charges will be calculated as under :

Scheduled Energy at ex-bus P/P of VARSANA ISPAT:-

$$= \sum_{i=1}^{96} (SDL(o))(in \text{ mwh})...$$

Where i= 1 to 96 block

SDL(o) = Open Access schedule at ex-bus P/P

VARSANA ISPAT will be paid by beneficiaries receiving energy from VARSANA ISPAT either through their wheeling arrangement or short term or long term open access. The scheduled energy of VARSANA ISPAT will be incorporated into State Energy Account (SEA) with bifurcation of beneficiaries. The VARSANA ISPAT and beneficiaries have to settle energy as per Statement of SEA.

- F. APPLICABILITY OF GAMING TO CAPTIVE POWER PLANT:** VARSANA ISPAT is captive power plant whose fixed cost is not fully borne by beneficiaries and injecting surplus power into grid after their own consumption. Therefore, provision 14(ii) of Open Access Regulation 2005 will be applicable as ceiling limit.

Procedure of energy accounting in the event of exceeding limit of 105% in a block:

*If, $ESO_{(VIL)} > 1.05 \times SDL_{(VIL)}$ in a block (energy in mwh),
Injection beyond ceiling limit will be $(ESO_{(VIL)} - 1.05 \times SDL_{(VIL)})$*

*Therefore, $ESO_{(VIL)}$ will be revised in that particular block as....
 $RV-ESO_{(VIL)} = 1.05 \times SDL_{(VIL)}$*

Procedure of energy accounting in the event of exceeding limit of 101% in a block:

*If, $ESO_{(VIL)} > 1.01 \times SDL_{(VIL)}$, in a day (energy in mwh)
Injection beyond ceiling limit will be $(ESO_{(VIL)} - 1.01 \times SDL_{(VIL)})$*

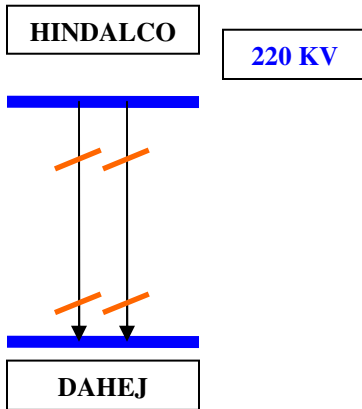
*Therefore, $ESO_{(VIL)}$ will be revised for a whole day as....
 $RV-ESO_{(VIL)} = 1.01 \times SDL_{(VIL)}$*

Reduction of excess energy injected by VARSANA ISPAT will be carried out as under by identifying blocks as under:

If all 96 blocks have exceeds the limit of 101 %, the excess energy will be reduced by average of all 96 blocks for whole day. The treatment of 105% will be ignored in such case. .

If some of the blocks in a day say 34 blocks (generally more than 6 blocks in continuous) have consistently over injected beyond prescribed limit, the excess energy of such blocks will be reduced proportionately.

10. HINDALCO LTD:



UNIT NO.	INSTALLED CAPACITY	CONTRACT CAPACITY
1	134.8	40
TOTAL	134.8	40

A. METERING ARRANGEMENT:

Sr. No.	Type	Quantity
1	Main	2
2	Check	0
3	Stand By	0
	Total	2

Meters are installed at outgoing line of HINDALCO for measurement of power injection into the grid.

In order to ensure the correctness of energy recorded in meter data, the data recorded at injecting end and receiving end of GETCO substation will be used.

B. SCHEDULING ARRANGEMENT :

Pool losses of Intra State Transmission Network: *1 % (estimated by SLDC)*

Ex-bus Availability declaration of HINDALCO in one block = **DC** _(HIN)

Net ex-bus Injection Schedule of HINDALCO (in one block) = **SDL** _(HIN)

Let the beneficiaries of open access transactions = ob1, ob2

Open Access Transaction (to third party through Inter State Transactions)

HINDALCO is supplying power to trading agency through short term contract for 28 MW, the day ahead/ same day schedule submitted by HINDALCO and finalized by SLDC by adjusting pool losses. The revision in such schedule will be carried out as per the open access regulation issued by appropriate commission.

Let us assume that $SDL(ob) = SDL(ob1) + SDL(ob2) + \dots$ (b)

Schedule at ex-bus of HINDALCO will be as

$SDL(HIN) = SDL(o)$at injecting end

Schedule at periphery of Gujarat State will be as.....

$SDL(HIN) = (SDL(o)) - (Transmission\ losses) \times ((SDL(o)))$at p/p of Gujarat State

C. ENERGY SENT OUT (ESO) OF HINDALCO: The net ex-bus energy sent out from the generating station will be calculated as summation of net energy metered by SEM installed for each 15 minute block :

$$ESO_{(HIN)} = \Sigma [OG (Dahej-1) + OG (Dahej-2)].....(ii)$$

Where OG(Dahej-1)= MWH reading of main meter of 220KV Dahej line no.1

OG(Dahej-2)= MWH reading of main meter of 220KV Dahej line no.2

D. UNSCHEDULED INTERCHANGE OF ENERGY (UI(HINDALCO)): The net unscheduled interchange energy of HINDALCO generating station will be calculated as difference between schedule energy and energy sent out for each 15 minute block.

$$UI (HIN)=((SDL_{(HIN)})-(ESO_{(HIN)})) \dots as per equation (i)-(ii)....(iii)$$

If,

- (i) Injection of HINDALCO is less than Schedule, UI(HIN) will be negative and HINDALCO will be payable for compensating under injection in that respective 15 minute block.
- (ii) Injection of HINDALCO is higher than Schedule, UI(HIN) will be positive and HINDALCO will be receivable for compensating over injection in that respective 15 minute block.

E. SETTLEMENT OF ENERGY CHARGES WITH (HINDALCO): The energy for calculation of energy charges will be calculated as under :

Scheduled Energy at ex-bus P/P of HINDALCO:-

$$= \sum_{i=1}^{96} (SDL(o))(in mwh)...$$

Where i= 1 to 96 block

SDL(o) = Open Access schedule at ex-bus P/P

HINDALCO will be paid by beneficiaries receiving energy from HINDALCO either through their wheeling arrangement or short term or long term open access. The scheduled energy of HINDALCO will be incorporated into State Energy Account (SEA) with bifurcation of beneficiaries. The HINDALCO and beneficiaries have to settle energy as per Statement of SEA.

F. APPLICABILITY OF GAMING TO CAPTIVE POWER PLANT: HINDALCO is captive power plant whose fixed cost is not fully borne by beneficiaries and injecting surplus power into grid after their own consumption. Therefore, provision 14(ii) of Open Access Regulation 2005 will be applicable as ceiling limit.

Procedure of energy accounting in the event of exceeding limit of 105% in a block:

*If, $ESO_{(HIN)} > 1.05 \times SDL_{(HIN)}$ in a block (energy in mwh),
Injection beyond ceiling limit will be $(ESO_{(HIN)} - 1.05 \times SDL_{(HIN)})$*

*Therefore, $ESO_{(HIN)}$ will be revised in that particular block as....
 $RV-ESO_{(HIN)} = 1.05 \times SDL_{(HIN)}$*

Procedure of energy accounting in the event of exceeding limit of 101% in a block:

*If, $ESO_{(HIN)} > 1.01 \times SDL_{(HIN)}$, in a day (energy in mwh)
Injection beyond ceiling limit will be $(ESO_{(HIN)} - 1.01 \times SDL_{(HIN)})$*

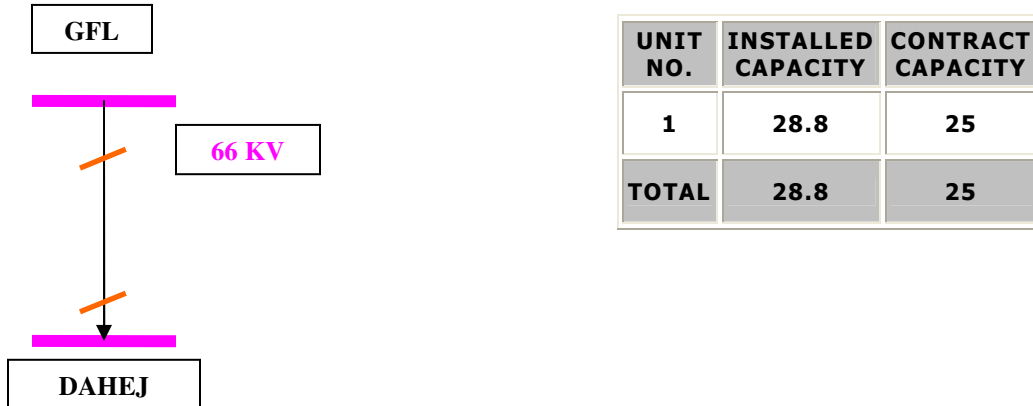
*Therefore, $ESO_{(VIL)}$ will be revised for a whole day as....
 $RV-ESO_{(HIN)} = 1.01 \times SDL_{(HIN)}$*

Reduction of excess energy injected by HINDALCO will be carried out as under by identifying blocks as under:

If all 96 blocks have exceeds the limit of 101 %, the excess energy will be reduced by average of all 96 blocks for whole day. The treatment of 105% will be ignored in such case. .

If some of the blocks in a day say 34 blocks (generally more than 6 blocks in continuous) have consistently over injected beyond prescribed limit, the excess energy of such blocks will be reduced proportionately.

11. GFL:



A. METERING ARRANGEMENT:

Sr. No.	Type	Quantity
1	Main	1
2	Check	0
3	Stand By	0
	Total	1

Meters are installed at outgoing line of GFL for measurement of power injection into the grid.

In order to ensure the correctness of energy recorded in meter data, the data recorded at injecting end and receiving end of GETCO substation will be used.

B. SCHEDULING ARRANGEMENT :

Pool losses of Intra State Transmission Network: **1 % (estimated by SLDC)**

Ex-bus Availability declaration of GFL in one block = **DC_(GFL)**

Net ex-bus Injection Schedule of GFL (in one block) = **SDL_(GFL)**

Let the beneficiaries of open access transactions = ob1, ob2

Open Access Transaction (to third party through Inter State Transactions)

GFL is supplying power to trading agency through short term contract for 25 MW, the day ahead/ same day schedule submitted by GFL and finalized by SLDC by adjusting pool losses. The revision in such schedule will be carried out as per the open access regulation issued by appropriate commission.

Let us assume that $SDL(ob) = SDL(ob1) + SDL(ob2) + \dots$ (b)

Schedule at ex-bus of GFL will be as

$SDL(GFL) = SDL(o)$at injecting end

Schedule at periphery of Gujarat State will be as.....

$SDL(GFL) = (SDL(o)) - (Transmission\ losses) \times ((SDL(o)))$at p/p of Gujarat State

C. ENERGY SENT OUT (ESO) OF GFL: The net ex-bus energy sent out from the generating station will be calculated as summation of net energy metered by SEM installed for each 15 minute block :

$$ESO_{(GFL)} = \sum [OG (Dahej-1)].....(ii)$$

Where OG(Dahej-1)= MWH reading of main meter of 66KV Dahej line no.1

D. UNSCHEDULED INTERCHANGE OF ENERGY (UI(GFL)): The net unscheduled interchange energy of GFL generating station will be calculated as difference between schedule energy and energy sent out for each 15 minute block.

$$UI (GFL)=((SDL_{(GFL)})-(ESO_{(GFL)})) \dots \text{as per equation (i)-(ii)}....(iii)$$

If,

- (i) Injection of GFL is less than Schedule, UI(GFL) will be negative and GFL will be payable for compensating under injection in that respective 15 minute block.
- (ii) Injection of GFL is higher than Schedule, UI(GFL) will be positive and GFL will be receivable for compensating over injection in that respective 15 minute block.

E. SETTLEMENT OF ENERGY CHARGES WITH (GFL): The energy for calculation of energy charges will be calculated as under :

Scheduled Energy at ex-bus P/P of GFL:-

$$= \sum_{i=1}^{96} (SDL(o))(\text{in mwh})...$$

Where i= 1 to 96 block

SDL(o) = Open Access schedule at ex-bus P/P

GFL will be paid by beneficiaries receiving energy from GFL either through their wheeling arrangement or short term or long term open access. The scheduled energy of GFL will be incorporated into State Energy Account (SEA) with bifurcation of beneficiaries. The GFL and beneficiaries have to settle energy as per Statement of SEA.

F. APPLICABILITY OF GAMING TO CAPTIVE POWER PLANT: GFL is captive power plant whose fixed cost is not fully borne by beneficiaries and injecting

surplus power into grid after their own consumption. Therefore, provision 14(ii) of Open Access Regulation 2005 will be applicable as ceiling limit.

Procedure of energy accounting in the event of exceeding limit of 105% in a block:

*If, $ESO_{(GFL)} > 1.05 \times SDL_{(GFL)}$ in a block (energy in mwh),
Injection beyond ceiling limit will be $(ESO_{(GFL)} - 1.05 \times SDL_{(GFL)})$*

Therefore, $ESO_{(GFL)}$ will be revised in that particular block as....
 $RV-ESO_{(GFL)} = 1.05 \times SDL_{(GFL)}$

Procedure of energy accounting in the event of exceeding limit of 101% in a block:

*If, $ESO_{(GFL)} > 1.01 \times SDL_{(GFL)}$, in a day (energy in mwh)
Injection beyond ceiling limit will be $(ESO_{(GFL)} - 1.01 \times SDL_{(GFL)})$*

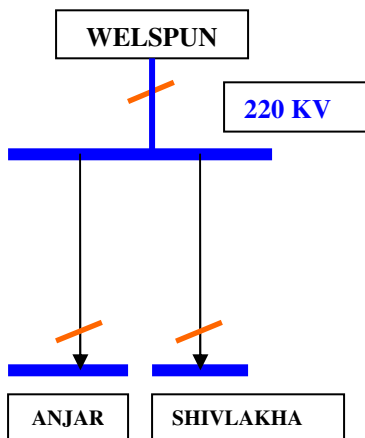
Therefore, $ESO_{(GFL)}$ will be revised for a whole day as....
 $RV-ESO_{(GFL)} = 1.01 \times SDL_{(GFL)}$

Reduction of excess energy injected by GFL will be carried out as under by identifying blocks as under:

If all 96 blocks have exceeds the limit of 101 %, the excess energy will be reduced by average of all 96 blocks for whole day. The treatment of 105% will be ignored in such case. .

If some of the blocks in a day say 34 blocks (generally more than 6 blocks in continuous) have consistently over injected beyond prescribed limit, the excess energy of such blocks will be reduced proportionately.

12. WELSPUN:



UNIT NO.	INSTALLED CAPACITY	CONTRACT CAPACITY
1	43	40
TOTAL	43	40

A. METERING ARRANGEMENT:

Sr. No.	Type	Quantity
1	Main	1
2	Check	0
3	Stand By	0
	Total	1

Meters are installed at outgoing line of WELSPUN for measurement of power injection into the grid.

In order to ensure the correctness of energy recorded in meter data, the data recorded at injecting end and receiving end of GETCO substation will be used.

B. SCHEDULING ARRANGEMENT :

Pool losses of Intra State Transmission Network: **1 % (estimated by SLDC)**

Ex-bus Availability declaration of WELSPUN in one block = **DC_(WLS)**

Net ex-bus Injection Schedule of WELSPUN (in one block) = **SDL_(WLS)**

Let the beneficiaries of open access transactions = ob1, ob2

Open Access Transaction (to third party through Inter State Transactions)

WELSPUN is supplying power to trading agency through short term contract for 40 MW, the day ahead/ same day schedule submitted by WELSPUN and finalized by SLDC by adjusting pool losses. The revision in such schedule will be carried out as per the open access regulation issued by appropriate commission.

Let us assume that $SDL(ob) = SDL(ob1) + SDL(ob2) + \dots$ (b)

Schedule at ex-bus of GFL will be as

$SDL(WELSPUN) = SDL(o) \dots$ at injecting end

Schedule at periphery of Gujarat State will be as.....

$SDL(WELSPUN) = (SDL(o)) - (Transmission\ losses) \times ((SDL(o))) \dots$ at p/p of Gujarat State

C. ENERGY SENT OUT (ESO) OF WELSPUN: The net ex-bus energy sent out from the generating station will be calculated as summation of net energy metered by SEM installed for each 15 minute block :

$$ESO_{(WLS)} = \sum [OG (Anjar-1)] \dots \dots \dots (ii)$$

Where $OG(Anjar-1)$ = MWH reading of main meter of 66KV Anjar line no.1

D. UNSCHEDULED INTERCHANGE OF ENERGY (UI(WELSPUN)): The net unscheduled interchange energy of WELSPUN generating station will be

calculated as difference between schedule energy and energy sent out for each 15 minute block.

$$UI (WELSPUN) = ((SDL_{(WLS)}) - (ESO_{(WLS)})) \dots \text{as per equation (i)-(ii)...(iii)}$$

If,

- (i) Injection of WELSPUN is less than Schedule, UI(WELSPUN) will be negative and WELSPUN will be payable for compensating under injection in that respective 15 minute block.
- (ii) Injection of WELSPUN is higher than Schedule, UI(WELSPUN) will be positive and WELSPUN will be receivable for compensating over injection in that respective 15 minute block.

E. SETTLEMENT OF ENERGY CHARGES WITH (WELSPUN): The energy for calculation of energy charges will be calculated as under :

Scheduled Energy at ex-bus P/P of WELSPUN:-

$$= \sum_{i=1}^{96} (SDL(o)) \text{ (in mwh) } \dots$$

Where i= 1 to 96 block

SDL(o) = Open Access schedule at ex-bus P/P

WELSPUN will be paid by beneficiaries receiving energy from WELSPUN either through their wheeling arrangement or short term or long term open access. The scheduled energy of WELSPUN will be incorporated into State Energy Account (SEA) with bifurcation of beneficiaries. The WELSPUN and beneficiaries have to settle energy as per Statement of SEA.

F. APPLICABILITY OF GAMING TO CAPTIVE POWER PLANT: WELSPUN is captive power plant whose fixed cost is not fully borne by beneficiaries and injecting surplus power into grid after their own consumption. Therefore, provision 14(ii) of Open Access Regulation 2005 will be applicable as ceiling limit.

Procedure of energy accounting in the event of exceeding limit of 105% in a block:

*If, $ESO_{(WLS)} > 1.05 \times SDL_{(WLS)}$ in a block (energy in mwh),
Injection beyond ceiling limit will be $(ESO_{(WLS)} - 1.05 \times SDL_{(WLS)})$*

Therefore, $ESO_{(WLS)}$ will be revised in that particular block as....

$$RV-ESO_{(WLS)} = 1.05 \times SDL_{(WLS)}$$

Procedure of energy accounting in the event of exceeding limit of 101% in a block:

If, $ESO_{(WLS)} > 1.01 \times SDL_{(WLS)}$, in a day (energy in mwh)
 Injection beyond ceiling limit will be $(ESO_{(WLS)} - 1.01 \times SDL_{(WLS)})$

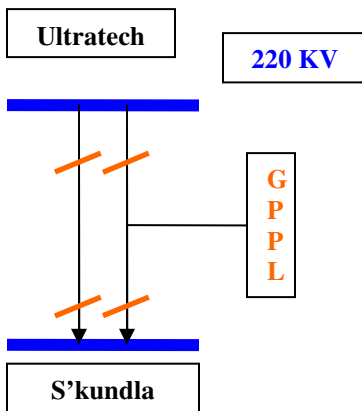
Therefore, $ESO_{(WLS)}$ will be revised for a whole day as....
 $RV-ESO_{(WLS)} = 1.01 \times SDL_{(WLS)}$

Reduction of excess energy injected by WELSPUN will be carried out as under by identifying blocks as under:

If all 96 blocks have exceeds the limit of 101 %, the excess energy will be reduced by average of all 96 blocks for whole day. The treatment of 105% will be ignored in such case. .

If some of the blocks in a day say 34 blocks (generally more than 6 blocks in continuous) have consistently over injected beyond prescribed limit, the excess energy of such blocks will be reduced proportionately.

13. ULTRATECH CEMENT, KOVAYA:



UNIT NO.	INSTALLED CAPACITY	CONTRACT CAPACITY
1	92	44
TOTAL	92	44

A. METERING ARRANGEMENT:

Sr. No.	Type	Quantity
1	Main	2
2	Check	0
3	Stand By	0
	Total	2

Meters are installed at outgoing line of ULTRATECH for measurement of power injection into the grid.

In order to ensure the correctness of energy recorded in meter data, the data recorded at injecting end and receiving end of GETCO substation will be used.

B. SCHEDULING ARRANGEMENT :

Pool losses of Intra State Transmission Network: *1 % (estimated by SLDC)*

Ex-bus Availability declaration of UTCL in one block = **DC** _(UTCL)

Net ex-bus Injection Schedule of UTCL (in one block) = **SDL** _(UTCL)

Let the beneficiaries of wheeling transactions = wb1, wb2

Let the beneficiaries of open access transactions = ob1, ob2

Wheeling Transaction:

UTCL is wheeling MW capacity to their own companies, scheduling of such transaction will have to submit on day ahead basis by injecting companies.

Let us assume that aggregate wheeling schedule is ,

$$SDL(wb) = SDL(wb1)+SDL(wb2)+.....(a)$$

Open Access Transaction (to third party through Inter State Transactions)

UTCL is supplying power to trading agency through short term contract for MW, the day ahead/ same day schedule submitted by UTCL and finalized by SLDC by adjusting pool losses. The revision in such schedule will be carried out as per the open access regulation issued by appropriate commission.

Let us assume that $SDL(ob) = SDL(ob1)+SDL(ob2)+.....(b)$

Schedule at ex-bus of UTCL will be as

$$SDL(UTCL) = SDL(o) + SDL(W).....at injecting end$$

Schedule at notional periphery of distribution licensee will be as.....

$$SDL(wb) = (SDL(w) - (pool losses) \times (SDL(w)))$$

$$SDL(UTCL(ob)) = (SDL(o) - (pool losses) \times (SDL(o))).....at p/p of distribution licensee$$

Note : This schedule will be added in consolidate schedule of respective distribution licensee where receiving entity is located. If wheeling and open access transactions are located in more than one distribution licensee, the proportionate schedule will be added, but pool losses will remain unchanged.

Schedule at physical periphery of receiving entity will be as.....

$$SDL(wb) = (SDL(w) - (transmission losses) \times (SDL(w)))$$

$$SDL(UTCL(ob)) = (SDL(o) - (transmission losses) \times (SDL(o))).....$$

Where, Pool losses = Weekly estimated by SLDC

Transmission losses = Monthly estimated by SLDC

Note : This schedule will have to prepare by respective distribution licensee by adjustment of transmission losses (declared by SLDC) to the schedule already received by them in consolidated format from SLDC. This schedule will have to used by distribution licensee for the purpose of energy accounting and adjusting credit of wheeling or open access transaction as the case may be.

C. ENERGY SENT OUT (ESO) OF UTCL: The net ex-bus energy sent out from the generating station will be calculated as summation of net energy metered by SEM installed for each 15 minute block :

$$ESO_{(UTCL)} = \Sigma [OG (S'kundla-1)+ OG (S'kundla-2)].....(ii)$$

Where OG(S'kundla -1)= MWH reading of main meter of 66KV S'kundla line no.1

OG(S'kundla -2)= MWH reading of main meter of 66KV S'kundla line no.2

D. UNSCHEDULED INTERCHANGE OF ENERGY (UI(UTCL)): The net unscheduled interchange energy of UTCL generating station will be calculated as difference between schedule energy and energy sent out for each 15 minute block.

$$UI (UTCL)=((SDL_{(UTCL)})-(ESO_{(UTCL)})) \dots as per equation (i)-(ii)....(iii)$$

If,

- (i) Injection of UTCL is less than Schedule, UI(UTCL) will be negative and UTCL will be payable for compensating under injection in that respective 15 minute block.
- (ii) Injection of UTCL is higher than Schedule, UI(UTCL) will be positive and UTCL will be receivable for compensating over injection in that respective 15 minute block.

E. SETTLEMENT OF ENERGY CHARGES WITH (UTCL): The energy for calculation of energy charges will be calculated as under :

Scheduled Energy at ex-bus P/P of UTCL:-

$$= \sum_{i=1}^{96} (SDL(o))(in mwh)...$$

Where i= 1 to 96 block

SDL(o) = Open Access schedule at ex-bus P/P

UTCL will be paid by beneficiaries receiving energy from UTCL either through their wheeling arrangement or short term or long term open access. The scheduled energy of UTCL will be incorporated into State Energy Account (SEA) with bifurcation of beneficiaries. The UTCL and beneficiaries have to settle energy as per Statement of SEA.

- F. APPLICABILITY OF GAMING TO CAPTIVE POWER PLANT:** UTCL is captive power plant whose fixed cost is not fully borne by beneficiaries and injecting surplus power into grid after their own consumption. Therefore, provision 14(ii) of Open Access Regulation 2005 will be applicable as ceiling limit.

Procedure of energy accounting in the event of exceeding limit of 105% in a block:

*If, $ESO_{(UTCL)} > 1.05 \times SDL_{(UTCL)}$ in a block (energy in mwh),
Injection beyond ceiling limit will be $(ESO_{(UTCL)} - 1.05 \times SDL_{(UTCL)})$*

Therefore, $ESO_{(UTCL)}$ will be revised in that particular block as....

$$RV-ESO_{(UTCL)} = 1.05 \times SDL_{(UTCL)}$$

Procedure of energy accounting in the event of exceeding limit of 101% in a block:

*If, $ESO_{(UTCL)} > 1.01 \times SDL_{(UTCL)}$, in a day (energy in mwh)
Injection beyond ceiling limit will be $(ESO_{(UTCL)} - 1.01 \times SDL_{(UTCL)})$*

Therefore, $ESO_{(UTCL)}$ will be revised for a whole day as....

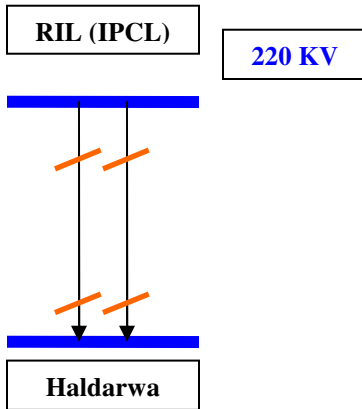
$$RV-ESO_{(UTCL)} = 1.01 \times SDL_{(UTCL)}$$

Reduction of excess energy injected by UTCL will be carried out as under by identifying blocks as under:

If all 96 blocks have exceeds the limit of 101 %, the excess energy will be reduced by average of all 96 blocks for whole day. The treatment of 105% will be ignored in such case. .

If some of the blocks in a day say 34 blocks (generally more than 6 blocks in continuous) have consistently over injected beyond prescribed limit, the excess energy of such blocks will be reduced proportionately.

14. RIL(IPCL),DAHEJ:



UNIT NO.	INSTALLED CAPACITY	CONTRACT CAPACITY
1	154.5	15
TOTAL	154.5	15

A. METERING ARRANGEMENT:

Sr. No.	Type	Quantity
1	Main	2
2	Check	0
3	Stand By	0
	Total	2

Meters are installed at outgoing line of RIL(IPCL) for measurement of power injection into the grid.

In order to ensure the correctness of energy recorded in meter data, the data recorded at injecting end and receiving end of GETCO substation will be used.

B. SCHEDULING ARRANGEMENT :

Pool losses of Intra State Transmission Network: **1 % (estimated by SLDC)**

Ex-bus Availability declaration of RIL(IPCL) in one block = **DC_(RIL)**

Net ex-bus Injection Schedule of RIL(IPCL) (in one block) = **SDL_(RIL)**

Let the beneficiaries of Intra State transactions = ob1

Sell to GUVNL through Intra State Transactions

RIL(IPCL) is supplying power to GUVNL for 15 MW, the day ahead/ same day schedule submitted by RIL(IPCL) and finalized by SLDC by adjusting pool losses. The revision in such schedule will be carried out as per the open access regulation issued by appropriate commission.

Let us assume that $SDL(ob) = SDL(ob1) \dots\dots\dots (b)$

Where, ob1= sell to GUVNL

Schedule at ex-bus of RIL(IPCL) will be as

$SDL (RIL(IPCL))= SDL(o) \dots\dots\dots$ at injecting end

Schedule at notional periphery of distribution licensee will be as.....
 $SDL(RIL(IPCL)) = (SDL(o)) - (\text{pool losses}) \times ((SDL(o)))$at p/p of distribution licensee

Note : This schedule will be added in consolidate schedule of respective distribution licensee where receiving entity is located. If wheeling and open access transactions are located in more than one distribution licensee, the proportionate schedule will be added, but pool losses will remain unchanged.

Schedule at physical periphery of receiving entity will be as.....
 $SDL(RIL(IPCL)) = (SDL(o)) - (\text{transmission losses}) \times ((SDL(o)))$

Where, Pool losses = Weekly estimated by SLDC
 Transmission losses = Monthly estimated by SLDC

Note : This schedule will have to prepare by respective distribution licensee by adjustment of transmission losses (declared by SLDC) to the schedule already received by them in consolidated format from SLDC. This schedule will have to used by distribution licensee for the purpose of energy accounting and adjusting credit of wheeling or open access transaction as the case may be.

C. ENERGY SENT OUT (ESO) OF RIL(IPCL): The net ex-bus energy sent out from the generating station will be calculated as summation of net energy metered by SEM installed for each 15 minute block :

$$ESO_{(RIL)} = \Sigma [OG (Haldarwa-1) + OG (Haldarwa-2)] \dots\dots\dots(ii)$$

Where OG(Haldarwa-1)= MWH reading of main meter of 220KV Haldarwa line no.1
 OG(Haldarwa-2)= MWH reading of main meter of 220KV Haldarwa line no.2

D. UNSCHEDULED INTERCHANGE OF ENERGY (UI(RIL(IPCL))): The net unscheduled interchange energy of WELSPUN generating station will be calculated as difference between schedule energy and energy sent out for each 15 minute block.

$$UI (RIL(IPCL)) = ((SDL_{(WLS)}) - (ESO_{(WLS)})) \dots \text{as per equation (i)-(ii)} \dots (iii)$$

If,

(iii) Injection of RIL(IPCL) is less than Schedule, UI(RIL(IPCL)) will be negative and RIL(IPCL) will be payable for compensating under injection in that respective 15 minute block.

- (iv) Injection of RIL(IPCL) is higher than Schedule, UI(RIL(IPCL)) will be positive and RIL(IPCL) will be receivable for compensating over injection in that respective 15 minute block.

E. SETTLEMENT OF ENERGY CHARGES WITH (RIL(IPCL)): The energy for calculation of energy charges will be calculated as under :

Scheduled Energy at ex-bus P/P of RIL(IPCL):-

$$= \sum_{i=1}^{96} (\text{SDL}(o)) \text{ (in mwh) ...}$$

Where $i = 1$ to 96 block

SDL(o) = Open Access schedule at ex-bus P/P

RIL(IPCL) will be paid by beneficiaries receiving energy from RIL(IPCL) either through their wheeling arrangement or short term or long term open access. The scheduled energy of RIL(IPCL) will be incorporated into State Energy Account (SEA) with bifurcation of beneficiaries. The RIL(IPCL) and beneficiaries have to settle energy as per Statement of SEA.

F. APPLICABILITY OF GAMING TO CAPTIVE POWER PLANT: RIL(IPCL) is captive power plant whose fixed cost is not fully borne by beneficiaries and injecting surplus power into grid after their own consumption. Therefore, provision 14(ii) of Open Access Regulation 2005 will be applicable as ceiling limit.

Procedure of energy accounting in the event of exceeding limit of 105% in a block:

*If, $ESO_{(RIL)} > 1.05 \times SDL_{(RIL)}$ in a block (energy in mwh),
Injection beyond ceiling limit will be $(ESO_{(RIL)} - 1.05 \times SDL_{(RIL)})$*

*Therefore, $ESO_{(RIL)}$ will be revised in that particular block as....
 $RV-ESO_{(RIL)} = 1.05 \times SDL_{(RIL)}$*

Procedure of energy accounting in the event of exceeding limit of 101% in a block:

*If, $ESO_{(RIL)} > 1.01 \times SDL_{(RIL)}$, in a day (energy in mwh)
Injection beyond ceiling limit will be $(ESO_{(RIL)} - 1.01 \times SDL_{(RIL)})$*

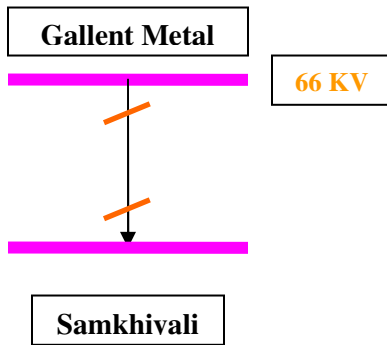
*Therefore, $ESO_{(RIL)}$ will be revised for a whole day as....
 $RV-ESO_{(RIL)} = 1.01 \times SDL_{(RIL)}$*

Reduction of excess energy injected by RIL(IPCL) will be carried out as under by identifying blocks as under:

If all 96 blocks have exceeds the limit of 101 %, the excess energy will be reduced by average of all 96 blocks for whole day. The treatment of 105% will be ignored in such case. .

If some of the blocks in a day say 34 blocks (generally more than 6 blocks in continuous) have consistently over injected beyond prescribed limit, the excess energy of such blocks will be reduced proportionately.

17. GALLENT METAL:



UNIT NO.	INSTALLED CAPACITY	CONTRACT CAPACITY
1	25	5
TOTAL	25	5

A. METERING ARRANGEMENT:

Sr. No.	Type	Quantity
1	Main	1
2	Check	0
3	Stand By	0
	Total	1

Meters are installed at outgoing line of GALLENT METAL for measurement of power injection into the grid.

In order to ensure the correctness of energy recorded in meter data, the data recorded at injecting end and receiving end of GETCO substation will be used.

B. SCHEDULING ARRANGEMENT :

Pool losses of Intra State Transmission Network: **1 % (estimated by SLDC)**

Ex-bus Availability declaration of GML in one block = **DC_(GML)**

Net ex-bus Injection Schedule of GML (in one block) = **SDL_(GML)**

Let the beneficiaries of open access transactions = ob1

Sell to GUVNL through Intra State Transactions

GML is supplying power to GUVNL for 5 MW, the day ahead/ same day schedule submitted by GML and finalized by SLDC by adjusting pool losses. The



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revision in such schedule will be carried out as per the open access regulation issued by appropriate commission.

Let us assume that $SDL(ob) = SDL(ob1) \dots\dots\dots(b)$

Where, ob1= sell to GUVNL

Schedule at ex-bus of GML will be as
 $SDL(GML) = SDL(o) \dots\dots\dots$ at injecting end

Schedule at notional periphery of distribution licensee will be as.....
 $SDL(GML) = (SDL(o) - (pool losses) \times (SDL(o))) \dots\dots$ at p/p of distribution licensee

Note : This schedule will be added in consolidate schedule of respective distribution licensee where receiving entity is located. If wheeling and open access transactions are located in more than one distribution licensee, the proportionate schedule will be added, but pool losses will remain unchanged.

Schedule at physical periphery of receiving entity will be as.....
 $SDL(GML) = (SDL(o) - (transmission losses) \times (SDL(o))) \dots\dots$

Where, Pool losses = Weekly estimated by SLDC
Transmission losses = Monthly estimated by SLDC

Note : This schedule will have to prepare by respective distribution licensee by adjustment of transmission losses (declared by SLDC) to the schedule already received by them in consolidated format from SLDC. This schedule will have to used by distribution licensee for the purpose of energy accounting and adjusting credit of wheeling or open access transaction as the case may be.

C. ENERGY SENT OUT (ESO) OF GALLENT METAL: The net ex-bus energy sent out from the generating station will be calculated as summation of net energy metered by SEM installed for each 15 minute block :

$$ESO_{(GML)} = \sum [OG (Samkhiyali-1)] \dots\dots\dots(ii)$$

Where $OG(Samkhiyali-1) =$ MWH reading of main meter of 66KV Samkhiyali line no.1

D. UNSCHEDULED INTERCHANGE OF ENERGY (UI(GALLENT METAL)): The net unscheduled interchange energy of GML generating station will be calculated as difference between schedule energy and energy sent out for each 15 minute block.

$$UI (GML) = ((SDL_{(GML)}) - (ESO_{(GML)})) \dots \text{as per equation (i)-(ii)} \dots (iii)$$

If,

- (i) Injection of GML is less than Schedule, UI(GML) will be negative and GML will be payable for compensating under injection in that respective 15 minute block.
- (ii) Injection of GML is higher than Schedule, UI(GML) will be positive and GML will be receivable for compensating over injection in that respective 15 minute block.

E. SETTLEMENT OF ENERGY CHARGES WITH (GALLENT METAL): The energy for calculation of energy charges will be calculated as under :

Scheduled Energy at ex-bus P/P of GML:-

$$= \sum_{i=1}^{96} (SDL(o)) \text{ (in mwh) } \dots$$

Where i= 1 to 96 block

SDL(o) = Open Access schedule at ex-bus P/P

GML will be paid by beneficiaries receiving energy from GML either through their wheeling arrangement or short term or long term open access. The scheduled energy of GML will be incorporated into State Energy Account (SEA) with bifurcation of beneficiaries. The GML and beneficiaries have to settle energy as per Statement of SEA.

F. APPLICABILITY OF GAMING TO CAPTIVE POWER PLANT: GML is captive power plant whose fixed cost is not fully borne by beneficiaries and injecting surplus power into grid after their own consumption. Therefore, provision 14(ii) of Open Access Regulation 2005 will be applicable as ceiling limit.

Procedure of energy accounting in the event of exceeding limit of 105% in a block:

*If, $ESO_{(GML)} > 1.05 \times SDL_{(GML)}$ in a block (energy in mwh),
Injection beyond ceiling limit will be $(ESO_{(GML)} - 1.05 \times SDL_{(GML)})$*

Therefore, $ESO_{(GML)}$ will be revised in that particular block as....

$$RV-ESO_{(GML)} = 1.05 \times SDL_{(GML)}$$

Procedure of energy accounting in the event of exceeding limit of 101% in a block:

*If, $ESO_{(GML)} > 1.01 \times SDL_{(GML)}$, in a day (energy in mwh)
Injection beyond ceiling limit will be $(ESO_{(GML)} - 1.01 \times SDL_{(GML)})$*

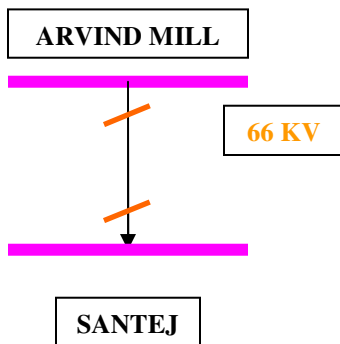
Therefore, $ESO_{(GML)}$ will be revised for a whole day as....
 $RV-ESO_{(GML)} = 1.01 \times SDL_{(GML)}$

Reduction of excess energy injected by GML will be carried out as under by identifying blocks as under:

If all 96 blocks have exceeds the limit of 101 %, the excess energy will be reduced by average of all 96 blocks for whole day. The treatment of 105% will be ignored in such case. .

If some of the blocks in a day say 34 blocks (generally more than 6 blocks in continuous) have consistently over injected beyond prescribed limit, the excess energy of such blocks will be reduced proportionately.

13. ARVIND MILL:



UNIT NO.	INSTALLED CAPACITY	CONTRACT CAPACITY
1	7.4	2.5
TOTAL	7.4	2.5

A. METERING ARRANGEMENT:

Sr. No.	Type	Quantity
1	Main	1
2	Check	0
3	Stand By	0
	Total	1

Meters are installed at outgoing line of ARVIND MILL for measurement of power injection into the grid.

In order to ensure the correctness of energy recorded in meter data, the data recorded at injecting end and receiving end of GETCO substation will be used.

B. SCHEDULING ARRANGEMENT :



Pool losses of Intra State Transmission Network: *1 % (estimated by SLDC)*
Ex-bus Availability declaration of ARVIND MILL in one block = **DC** _(AML)
Net ex-bus Injection Schedule of ARVIND MILL (in one block) = **SDL** _(AML)
Let the beneficiaries of open access transactions = ob1

Sell to GUVNL through Intra State Transactions

ARVIND MILL is supplying power to GUVNL 2.5 for MW, the day ahead/ same day schedule submitted by ARVIND MILL and finalized by SLDC by adjusting pool losses. The revision in such schedule will be carried out as per the open access regulation issued by appropriate commission.

Let us assume that $SDL(ob) = SDL(ob1) \dots \dots \dots (b)$

Where, ob1= sell to GUVNL

Schedule at ex-bus of AML will be as
 $SDL(AML) = SDL(o) \dots \dots \dots$ at injecting end

Schedule at notional periphery of distribution licensee will be as.....
 $SDL(AML) = (SDL(o) - (pool\ losses) \times (SDL(o))) \dots \dots$ at p/p of distribution licensee

Note : This schedule will be added in consolidate schedule of respective distribution licensee where receiving entity is located. If wheeling and open access transactions are located in more than one distribution licensee, the proportionate schedule will be added, but pool losses will remain unchanged.

Schedule at physical periphery of receiving entity will be as.....
 $SDL(AML) = (SDL(o) - (transmission\ losses) \times (SDL(o))) \dots \dots$

Where, Pool losses = Weekly estimated by SLDC
Transmission losses = Monthly estimated by SLDC

Note : This schedule will have to prepare by respective distribution licensee by adjustment of transmission losses (declared by SLDC) to the schedule already received by them in consolidated format from SLDC. This schedule will have to used by distribution licensee for the purpose of energy accounting and adjusting credit of wheeling or open access transaction as the case may be.

C. ENERGY SENT OUT (ESO) OF ARVIND MILL: The net ex-bus energy sent out from the generating station will be calculated as summation of net energy metered by SEM installed for each 15 minute block :

$$ESO_{(AML)} = \sum [OG (Santej-1)].....(ii)$$

Where OG(Santej-1)= MWH reading of main meter of 66KV Santej line no.1

D. UNSCHEDULED INTERCHANGE OF ENERGY (UI(ARVIND MILL)): The net unscheduled interchange energy of ARVIND MILL generating station will be calculated as difference between schedule energy and energy sent out for each 15 minute block.

$$UI (AML)=((SDL_{(AML)})-(ESO_{(AML)})) \dots as per equation (i)-(ii)....(iii)$$

If,

- (i) Injection of ARVIND MILL is less than Schedule, UI(AML) will be negative and ARVIND MILL will be payable for compensating under injection in that respective 15 minute block.
- (ii) Injection of ARVIND MILL is higher than Schedule, UI(AML) will be positive and ARVIND MILL will be receivable for compensating over injection in that respective 15 minute block.

E. SETTLEMENT OF ENERGY CHARGES WITH (ARVIND MILL): The energy for calculation of energy charges will be calculated as under :

Scheduled Energy at ex-bus P/P of ARVIND MILL:-

$$= \sum_{i=1}^{96} (SDL(o))(in mwh)...$$

Where i= 1 to 96 block
 SDL(o) = Open Access schedule at ex-bus P/P

ARVIND MILL will be paid by beneficiaries receiving energy from ARVIND MILL either through their wheeling arrangement or short term or long term open access. The scheduled energy of ARVIND MILL will be incorporated into State Energy Account (SEA) with bifurcation of beneficiaries. The ARVIND MILL and beneficiaries have to settle energy as per Statement of SEA.

F. APPLICABILITY OF GAMING TO CAPTIVE POWER PLANT: ARVIND MILL is captive power plant whose fixed cost is not fully borne by beneficiaries and injecting surplus power into grid after their own consumption. Therefore,

provision 14(ii) of Open Access Regulation 2005 will be applicable as ceiling limit.

Procedure of energy accounting in the event of exceeding limit of 105% in a block:

*If, $ESO_{(AML)} > 1.05 \times SDL_{(AML)}$ in a block (energy in mwh),
Injection beyond ceiling limit will be $(ESO_{(AML)} - 1.05 \times SDL_{(AML)})$*

Therefore, $ESO_{(AML)}$ will be revised in that particular block as....
 $RV-ESO_{(AML)} = 1.05 \times SDL_{(AML)}$

Procedure of energy accounting in the event of exceeding limit of 101% in a block:

*If, $ESO_{(AML)} > 1.01 \times SDL_{(AML)}$, in a day (energy in mwh)
Injection beyond ceiling limit will be $(ESO_{(AML)} - 1.01 \times SDL_{(AML)})$*

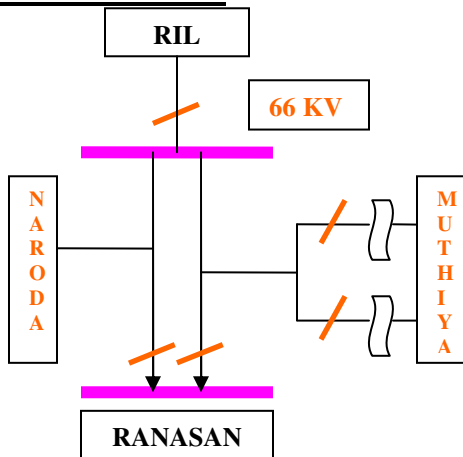
Therefore, $ESO_{(AML)}$ will be revised for a whole day as....
 $RV-ESO_{(AML)} = 1.01 \times SDL_{(AML)}$

Reduction of excess energy injected by ARVIND MILL will be carried out as under by identifying blocks as under:

If all 96 blocks have exceeds the limit of 101 %, the excess energy will be reduced by average of all 96 blocks for whole day. The treatment of 105% will be ignored in such case. .

If some of the blocks in a day say 34 blocks (generally more than 6 blocks in continuous) have consistently over injected beyond prescribed limit, the excess energy of such blocks will be reduced proportionately.

14. RIL-NARODA:



UNIT NO.	INSTALLED CAPACITY	CONTRACT CAPACITY
1	38	20
TOTAL	38	20

A. METERING ARRANGEMENT:

Sr. No.	Type	Quantity
1	Main	1
2	Check	0
3	Stand By	0
	Total	1

Meters are installed at outgoing line of RIL for measurement of power injection into the grid.

In order to ensure the correctness of energy recorded in meter data, the data recorded at injecting end and receiving end of GETCO substation will be used.

B. SCHEDULING ARRANGEMENT :

Pool losses of Intra State Transmission Network: *1 % (estimated by SLDC)*

Ex-bus Availability declaration of RIL in one block = **DC** _(RIL)

Net ex-bus Injection Schedule of RIL (in one block) = **SDL** _(RIL)

Let the beneficiaries of open access transactions = ob1

Sell to GUVNL through Intra State Transactions

RIL is supplying power to GUVNL for 20 MW, the day ahead/ same day schedule submitted by RIL-N and finalized by SLDC by adjusting pool losses. The revision in such schedule will be carried out as per the open access regulation issued by appropriate commission.

Let us assume that $SDL(ob) = SDL(ob1) \dots\dots\dots (b)$

Where, ob1= sell to GUVNL

Schedule at ex-bus of RIL will be as

$SDL (RIL) = SDL(o) \dots\dots\dots$ at injecting end

Schedule at notional periphery of distribution licensee will be as.....

$SDL(AML) = (SDL(o) - (pool\ losses) \times ((SDL(o)))) \dots\dots$ at p/p of distribution licensee

Note : This schedule will be added in consolidate schedule of respective distribution licensee where receiving entity is located. If wheeling and open access transactions are located in more than one distribution licensee, the proportionate schedule will be added, but pool losses will remain unchanged.

Schedule at physical periphery of receiving entity will be as.....

$SDL(AML) = (SDL(o) - (transmission\ losses) \times ((SDL(o)))) \dots\dots$

Where, Pool losses = Weekly estimated by SLDC
 Transmission losses = Monthly estimated by SLDC

Note : This schedule will have to prepare by respective distribution licensee by adjustment of transmission losses (declared by SLDC) to the schedule already received by them in consolidated format from SLDC. This schedule will have to used by distribution licensee for the purpose of energy accounting and adjusting credit of wheeling or open access transaction as the case may be.

C. ENERGY SENT OUT (ESO) OF RIL: The net ex-bus energy sent out from the generating station will be calculated as summation of net energy metered by SEM installed for each 15 minute block :

$$ESO_{(RIL)} = \sum [OG (Ranasan-1)] \dots\dots\dots(ii)$$

Where OG(Ranasan-1)= MWH reading of main meter of 66KV Ranasan line no.1

D. UNSCHEDULED INTERCHANGE OF ENERGY (UI(RIL)): The net unscheduled interchange energy of RIL generating station will be calculated as difference between schedule energy and energy sent out for each 15 minute block.

$$UI (RIL) = ((SDL_{(RIL)}) - (ESO_{(RIL)})) \dots \text{as per equation (i)-(ii)} \dots (iii)$$

If,

- (i) Injection of RIL is less than Schedule, UI(RIL) will be negative and RIL will be payable for compensating under injection in that respective 15 minute block.
- (ii) Injection of RIL is higher than Schedule, UI(RIL) will be positive and RIL will be receivable for compensating over injection in that respective 15 minute block.

E. SETTLEMENT OF ENERGY CHARGES WITH (RIL): The energy for calculation of energy charges will be calculated as under :

Scheduled Energy at ex-bus P/P of RIL:-

$$= \sum_{i=1}^{96} (SDL(o)) \text{ (in mwh) } \dots$$

Where i= 1 to 96 block

SDL(o) = Open Access schedule at ex-bus P/P

RIL will be paid by beneficiaries receiving energy from RIL either through their wheeling arrangement or short term or long term open access. The scheduled energy of RIL will be incorporated into State Energy Account (SEA) with

bifurcation of beneficiaries. The RIL and beneficiaries have to settle energy as per Statement of SEA.

- F. APPLICABILITY OF GAMING TO CAPTIVE POWER PLANT:** RIL is captive power plant whose fixed cost is not fully borne by beneficiaries and injecting surplus power into grid after their own consumption. Therefore, provision 14(ii) of Open Access Regulation 2005 will be applicable as ceiling limit.

Procedure of energy accounting in the event of exceeding limit of 105% in a block:

*If, $ESO_{(RIL)} > 1.05 \times SDL_{(RIL)}$ in a block (energy in mwh),
Injection beyond ceiling limit will be $(ESO_{(RIL)} - 1.05 \times SDL_{(RIL)})$*

Therefore, $ESO_{(RIL)}$ will be revised in that particular block as....

$$RV-ESO_{(RIL)} = 1.05 \times SDL_{(RIL)}$$

Procedure of energy accounting in the event of exceeding limit of 101% in a block:

*If, $ESO_{(RIL)} > 1.01 \times SDL_{(RIL)}$, in a day (energy in mwh)
Injection beyond ceiling limit will be $(ESO_{(RIL)} - 1.01 \times SDL_{(RIL)})$*

Therefore, $ESO_{(WLS)}$ will be revised for a whole day as....

$$RV-ESO_{(RIL)} = 1.01 \times SDL_{(RIL)}$$

Reduction of excess energy injected by RIL will be carried out as under by identifying blocks as under:

If all 96 blocks have exceeds the limit of 101 %, the excess energy will be reduced by average of all 96 blocks for whole day. The treatment of 105% will be ignored in such case. .

If some of the blocks in a day say 34 blocks (generally more than 6 blocks in continuous) have consistently over injected beyond prescribed limit, the excess energy of such blocks will be reduced proportionately.