



Ref. No. EG.10/1337

3rd December 2021

The Project Engineer,
Bureau of Energy Efficiency
4th floor, Sewa Bhawan,
RK Puram Sector-1
New Delhi-110066

Sub: Clarifications with respect to submission of BEE Energy Audit Report

I submit herewith for your kind consideration the BEE Energy Audit Report (the "Report") for the electricity distribution business of Kanan Devan Hills Plantations Company Private Limited (the "Licensee") in the licensed distribution area Munnar, Kerala for the period from 1st April 2020 to 31st March 2021.

With respect to the Report, I would like to draw your attention to the following points:

The power procurement and distribution of the Licensee slightly differs from other Licensees. From the Licensee's distribution network, KSEB Limited, the State Electricity distributor, draws power supply from 16 feedback points for distribution to its consumers outside the periphery of the Licensee's distribution network. Hence, for calculation of the distribution line loss of the licensee, KSEB's consumption taken back from Licensee's network should also be considered. This has been the practice followed consistently till date. The same has been approved by the State Electricity Regulator and is used for its regulatory submissions too.

Accordingly, the revised transmission line loss after considering the feedback consumption by KSEB is 10.98% (Line loss – 6.29 MU / Purchased units – 48.14 MU + Feedback units – 9.12 MU).

The input power supply is taken by the Licensee at two places; one is Pullivasal Generating Station (in one double circuit + one single circuit feeder) and another at Madupatty 2 MW Generating Station.

The metering points of the feeders from Pullivasal Generating Station are in the Licensees Switching Station. The feeder control with meter available in the HT Panel records the input in Licensee's Feeder Meter at the Switching Station. However, the generation from Madupatty 2 MW Generating Station is directly fed to Licensee's Madupatty Feeder.

Hence the input is only recorded in the meter kept in Madupatty Generating Station and not included in the Licensee's Feeder Meter at its Switching Station.

Hence the feeder wise import as reported only includes power import from the Pullivasal Generating Station and not the total power import from all the sources. The same should be duly considered while evaluating the T&D loss and Feeder wise T&D loss.

Thanking you,
Yours faithfully,

R. Jayaraman.
Energy Manager,
Engineering Department,

Kanan Devan Hills Plantations Company Private Limited
Registered Office: KDHP House, Munnar – 685 612, Kerala

General Information

1	Name of the DISCOM	Kanan Devan Hills Plantations Company Private Limited		
2	i) Year of Establishment	2007		
	ii) Government/Public/Private	Private		
3	DISCOM's Contact details & Address			
i	City/Town/Village	Munnar		
ii	District	Idukki		
iii	State	Kerala	Pin	685612
iv	Telephone	04868255107	Fax	
4	Registered Office			
i	Company's Chief Executive Name	K Mathew Abraham		
ii	Designation	Managing Director		
iii	Address	KDHP House		
iv	City/Town/Village	Munnar	P.O.	Munnar
v	District	Idukki		
vi	State	Kerala	Pin	685612
vii	Telephone	04868255000	Fax	
5	Nodal Officer Details*			
i	Nodal Officer Name (Designated at DISCOM's)	Raju U Warriar		
ii	Designation	Head- Engineering Department		
iii	Address	Engineering Department, KDHP		
iv	City/Town/Village	Munnar	P.O.	Munnar
v	District	Idukki		
vi	State	Kerala	Pin	685612
vii	Telephone	04868255101	Fax	
6	Energy Manager Details*			
i	Name	R. Jayaraman		
ii	Designation	Executive	Whether EA or EM	EM
iii	EA/EM Registration No.	Nil		
iv	Telephone	04868255107	Fax	
v	Mobile	9446130623	E-mail ID	jayaraman.r@kdhptea.co.in
7	Period of Information			
	Year of (FY) information including Date and Month (Start & End)	1st April, 2020 - 31st March, 2021		

Performance Summary of Electricity Distribution Companies			
1	Period of Information Year of (FY) information including Date and Month (Start & End)	1st April, 2020 - 31st March, 2021	
2	Technical Details		
(a)	Energy Input Details		
(i)	Input Energy Purchase (From Generation Source)	Million kwh	48.14
(ii)	Net input energy (at DISCOM Periphery after adjusting the transmission losses and energy traded)	Million kwh	48.14
(iii)	Total Energy billed (is the Net energy billed, adjusted for energy traded))	Million kwh	41.85
(b)	Transmission and Distribution (T&D) loss Details	Million kwh	6.29
		%	0.13
	Collection Efficiency	%	99%
(c)	Aggregate Technical & Commercial Loss	%	87%

I/We undertake that the information supplied in this Document and Pro-forma is accurate to the best of my knowledge and if any of the information supplied is found to be incorrect and such information result into loss to the Central Government or State Government or any of the authority under them or any other person affected, I/we undertake to indemnify such loss.

Authorised Signatory and Seal

Name of Authorised Signatory

Name of the DISCOM:

Full Address:-

Kanan Devan Hills Plantations
- Company Private Limited
ENGINEERING DEPARTMENT
MUNNAR P.O.
KERALA - 685 612

Seal



Signature:-

Name of Energy Manager*:

R. Jayaraman.

Registration Number:

Form-Details of Input Infrastructure

1	Parameters	Total	Covered during in audit	Verified by Auditor in Sample Check	Remarks (Source of data)
i	Number of circles				1
ii	Number of divisions				1
iii	Number of sub-divisions				1
iv	Number of feeders				7
v	Number of DTs				132
vi	Number of consumers				16023
2	Parameters	66kV and above	33kV	11/22kV	LT
a. i.	Number of conventional metered consumers	0	0	0	6430
ii	Number of consumers with 'smart' meters	0	0	0	0
iii	Number of consumers with 'smart prepaid' meters	0	0	0	0
iv	Number of consumers with 'AMR' meters	0	0	0	0
v	Number of consumers with 'non-smart prepaid' meters	0	0	36	9557
vi	Number of unmetered consumers	0	0	0	0
vii	Number of total consumers	0	0	36	0
b.i.	Number of conventionally metered Distribution Transformers	0	0	70	0
ii	Number of DTs with communicable meters	0	0	0	0
iii	Number of unmetered DTs	0	0	62	0
iv	Number of total Transformers	0	0	132	0
c.i.	Number of metered feeders	0	0	7	0
ii	Number of feeders with communicable meters	0	0	0	0
iii	Number of unmetered feeders	0	0	0	0
iv	Number of total feeders	0	0	7	0
d.	Line length (ct km)	0	0	185.05	189.01
e.	Length of Aerial Bunched Cables	0	0	0	0
f.	Length of Underground Cables		0		
3	Voltage level	Particulars	MU	Reference	Remarks (Source of data)
i	66kV and above	Long-Term Conventional	0	Includes input energy for franchisees	
		Medium Conventional	0		
		Short Term Conventional	0		
		Banking	0		
		Long-Term Renewable energy	0		
		Medium and Short-Term RE	0	Includes power from bilateral/ PX/ DEEP	
		Captive, open access input	0	Any power wheeled for any purchase other than sale to DISCOM. Does not include input for franchisee.	
		Sale of surplus power	0		
		Quantum of inter-state transmission loss	0	As confirmed by SLDC, RLDC etc	
		Power procured from inter-state sources	0	Based on data from Form 5	
Power at state transmission boundary	0				
ii	33kV	Long-Term Conventional	0		
		Medium Conventional	0		
		Short Term Conventional	0		
		Banking	0		
		Long-Term Renewable energy	0		
		Medium and Short-Term RE	0		
		Captive, open access input	0		
		Sale of surplus power	0.00%		
		Quantum of intra-state transmission loss	0		
		Power procured from intra-state sources	0		
iii	33 kV	Input in DISCOM wires network	0		
		Renewable Energy Procurement	0		
iv	33 kV	Small capacity conventional/ biomass/ hydro plants Procurement	0		
		Captive, open access input	0		
v	11 kV	Renewable Energy Procurement	0.028		
		Small capacity conventional/ biomass/ hydro plants Procurement	0		
vi	LT	Sales Migration Input	0		
		Renewable Energy Procurement	0		
vii		Sales Migration Input	0		
		Energy Embedded within DISCOM wires network	0.028		
viii		Total Energy Available/ Input	0		
4	Voltage level	Energy Sales Particulars	MU	Reference	
i	LT Level	DISCOM' consumers	11	Include sales to consumers in franchisee areas, unmetered consumers	
		Demand from open access, captive	0	Non DISCOM's sales	
		Embedded generation used at LT level	0	Demand from embedded generation at LT level	
		Sale at LT level	11		
		Quantum of LT level losses	0		
ii	11 kV Level	DISCOM' consumers	30	Include sales to consumers in franchisee areas, unmetered consumers	
		Demand from open access, captive	0	Non DISCOM's sales	
		Embedded generation at 11 kV level used	0	Demand from embedded generation at 11kV level	
		Sales at 11 kV level	30		
		Quantum of Losses at 11 kV	0		
iii	33 kV Level	DISCOM' consumers		Include sales to consumers in franchisee areas, unmetered consumers	
		Demand from open access, captive		Non DISCOM's sales	
		Embedded generation at 33 kV or below level		This is DISCOM and OA demand met via energy generated at same voltage level	

4	Voltage level	Energy Sales Particulars	MU	Reference
		Sales at 33 kV level	0	
		Quantum of Losses at 33 kV	0	
		Energy input at 33kV Level		
iv	> 33 kV	DISCOM' consumers		Include sales to consumers in franchisee areas, unmetered consumers
		Demand from open access, captive		Non DISCOM's sales
		Cross border sale of energy		
		Sale to other DISCOMs		
		Banking	0	
		Sales at 66kV and above (EHV)	0	
		Total Energy Requirement	0	
		Total Energy Sales	42	

Energy Accounting Summary

5	DISCOM	Input (in MU)	Sale (in MU)	Loss (in MU)	Loss %
i	LT				
ii	11 Kv	48.14	41.85	6.29	10.98
iii	33 kv				
iv	> 33 kv				
6	Open Access, Captive	Input (in MU)	Sale (in MU)	Loss (in MU)	
i	LT				
ii	11 Kv				
iii	33 kv				
iv	> 33 kv				

Loss Estimation for DISCOM

T&D loss	0
D loss	0
T&D loss (%)	1
D loss (%)	#DIV/0!

Details of Division Wise Losses (See note below)**

Division Wise Losses

Period From April 2020 to March 2021

S.No	Name of circle	Circle code	Name of Division	Consumer profile																	AT & C loss (%)	
				Consumer category	No of connection metered (Nos)	No of connection Un-metered (Nos)	Total Number of connections (Nos)	% of number of connections	Connected Load metered (MW)	Connected Load Un-metered (MW)	Total Connected Load (MW)	% of connected load	Energy parameters				Losses		Commercial Parameter			
													Input energy (MU)	Metered energy	Unmetered/assessment energy	Total energy	% of energy consumption	T&D loss (MU)	T&D loss (%)	Billed Amount in Rs. Crore		Collected Amount in Rs. Crore
1				Residential	13540	0	13540	85%	16.31	0	16.31	50%	48.14	7.44	0	7.44	18%	6.2874	13%	3.46	3.46	100.00%
				Agricultural	5	0	5	0%	0.04	0	0.04	0%		0.0126	0	0.0126	0%			0	0	0.00%
				Commercial/Industrial-LT	1267	0	1267	8%	4.66	0	4.66	14%		2.19	0	2.19	5%			2.26	2.16	95.58%
				Commercial/Industrial-HT	31	0	31	0%	8.72	0	8.72	27%		29.72	0	29.72	71%			21.05	21.03	99.90%
				Others	1180	0	1180	7%	2.93	0	2.93	9%		2.49	0	2.49	6%			2	1.96	98.00%
Sub-total				16023	0	16023	100%	32.66	0	32.66	100%	48.14	41.8526	0	41.8526	100%	6.2874	13%	28.77	28.61	99.44%	87%
76	Total			Residential	13540	0	13540	85%	16.31	0	16.31	50%	48.14	7.44	0	7.44	18%	6.2874	13%	3.46	3.46	100.00%
				Agricultural	5	0	5	0%	0.04	0	0.04	0%		0.0126	0	0.0126	0%			0	0	0.00%
				Commercial/Industrial-LT	1267	0	1267	8%	4.66	0	4.66	14%		2.19	0	2.19	5%			2.26	2.16	95.58%
				Commercial/Industrial-HT	31	0	31	0%	8.72	0	8.72	27%		29.72	0	29.72	71%			21.05	21.03	99.90%
				Others	1180	0	1180	7%	2.93	0	2.93	9%		2.49	0	2.49	6%			2	1.96	98.00%
At company level				16023	0	16023	100%	32.66	0	32.66	100%	48.14	41.8526	0	41.8526	100%	6.2874	13%	28.77	28.61	99.44%	87%

** Note - It shall be mandatory to record the energy supplied separately for each category of consumers which is being provided a separate rate of subsidy in the tariff, by the state government, so that the subsidy due for the electricity distribution company is quarterly calculated by multiplying the energy supplied to each of such category of consumers by the applicable rate of subsidy notified by the state government.

Color code	Parameter
	Please enter name of circle
	Please enter circle code
0	Please enter numeric value or 0
	Formula protected

I/We undertake that the information supplied in this Document and Pro-forma is accurate to the best of my knowledge and if any of the information supplied is found to be incorrect and such information result into loss to the Central Government or State Government or any of the authority under them or any other person affected, I/we undertake to indemnify such loss.

Authorised Signatory and Seal

Name of Authorised Signatory:

Name of the DISCOM:

Full Address:-

Seal

**Kanan Devan Hills Plantations
Company Private Limited
ENGINEERING DEPARTMENT
MUNNAR P.O.
KERALA - 685 612**

Signature:-

Name of Energy Manager:

Registration Number:

R. Jayaraman

Form-Input energy(Details of Input energy & Infrastructure)

A. Summary of energy input & Infrastructure

S.No	Parameters	Period From April 2020 To March 2021	Remarks (Source of data)
A.1	Input Energy purchased (MU)	48.14	Feedback unit not considered
A.2	Transmission loss (%)	13%	
A.3	Transmission loss (MU)	6.2874	Feedback unit not considered
A.4	Energy sold outside the periphery(MU)	0	
A.5	Open access sale (MU)	0	
A.6	EHT sale	0	
A.7	Net input energy (received at DISCOM periphery or at distribution point)-(MU)	10.28	
A.8	Is 100% metering available at 66/33 kV (Select yes or no from list)	No	
A.9	Is 100% metering available at 11 kV (Select yes or no from list)	Yes	
A.10	% of metering available at DT	45%	
A.11	% of metering available at consumer end	100%	
A.12	No of feeders at 66kV voltage level	0	
A.13	No of feeders at 33kV voltage level	0	
A.14	No of feeders at 11kV voltage level	7	
A.15	No of LT feeders level	132	
A.16	Line length (ckt. km) at 66kV voltage level	0	
A.17	Line length (ckt. km) at 33kV voltage level	0	
A.18	Line length (ckt. km) at 11kV voltage level	185.05	
A.19	Line length (km) at LT level	189.01	
A.20	Length of Aerial Bunched Cables	0	
A.21	Length of Underground Cables	0	
A.22	HT/LT ratio	01:01	

B. Meter reading of Input energy at injection points

S.No	Zone	Circle	Voltage Level (KVA)	Division (KVA)	Sub-Division (KVA)	Feeder ID	Feeder Name	Feeder Metering Status (Metered/ un-metered/ AMI/AMR)	Status of Meter (Functional/Non-functional)	Metering Date Date of last actual meter reading/ communication	Feeder Type (Agri/ Industrial/Mixed)	Status of Communication			Period from...to...				Sales	Remarks (Source of data)										
												% data received through automatically if feeder AMR/AMI	Number of hours when meter was unable to communicate in period	Total Number of hours in the period	Meter S.No	CT/PT ratio	Import (MU)	Export (MU)												
B.1	Munnar	Munnar	11 kV	TOTAL C D 9000	TOTAL CD 9000	Nayamakad	Nayamakad	Metered	Functioning	Daily	Mixed	nil	nil	nil	10222110245	100%	15.79	6.51												
B.2	Munnar	Munnar	11 kV	TOTAL C D 9000	TOTAL CD 9000	Madupatty	Madupatty	Metered	Functioning	Daily	Mixed	nil	nil	nil	10182110320	100%	8.04	10.14												
B.3	Munnar	Munnar	11 kV	TOTAL C D 9000	TOTAL CD 9000	Nettigudi	Nettigudi	Metered	Functioning	Daily	Mixed	nil	nil	nil	4498792	100%	10.39	10.77												
B.4	Munnar	Munnar	11 kV	TOTAL C D 9000	TOTAL CD 9000	Town	Town	Metered	Functioning	Daily	Mixed	nil	nil	nil	4498791	100%	7.05	4.71												
B.5	Munnar	Munnar	11 kV	TOTAL C D 9000	TOTAL CD 9000	ITD	ITD	Metered	Functioning	Daily	Mixed	nil	nil	nil	1022210158	100%	8.03	7.05												
B.6	Munnar	Munnar	11 kV	TOTAL C D 9000	TOTAL CD 9000	Pullivasal	Pullivasal	Metered	Functioning	Daily	Mixed	nil	nil	nil	10222110125	100%	2.82	2.67												
B.7	Munnar	Munnar	11 kV	TOTAL C D 9000	TOTAL CD 9000	Station	Station	Metered	Functioning	Daily	Mixed	nil	nil	nil	1.017214-11	100%	0.01	0.00												
B.1000	Total (MU)																													
B.1001	Net input energy at DISCOM periphery (MU)																													
D.1002																														

Please Refer letter No EG10/1337 dated 3rd December 2021

Color code	Parameter
	Please enter voltage level or leave blank
	Please enter feeder id and name or leave blank
	Enter meter no or leave blank
	Enter CT/PT ratio or leave blank
0	Please enter numeric value or 0
	Please select yes or no from list
	Formula protected

I/We undertake that the information supplied in this Document and Pro-forma is accurate to the best of my knowledge and if any of the information supplied is found to be incorrect and such information result into loss to the Central Government or State Government or any of the authority under them or any other person affected, I/we undertake to indemnify such loss.

Authorised Signatory and Seal
 Name of Authorised Signatory
 Name of the DISCOM:
 Full Address:
 Seal

Kanan Devan Hills Plantations
 Company Private Limited
ENGINEERING DEPARTMENT
 MUNNAR P.O.
 KERALA -685 612

Signature:
 Name of Energy Manager:
 Registration Number:

(Details of Feeder-wise losses)

Period From April 2020 To March 2021

Sl No.	Zone	Received at Circle (In MU)	Received at Division (In MU)	Received at Sub-division (In MU)	Name of the Station	Feeder Code/ID	Feeder Name	Type of Feeder (Urban/Mixed/Industrial/Agricultural/Rural)	Type of feeder meter (AMI/AMR/Other)	Received at Feeder (Final in MU)	Feeder Consumption (in MU)	Final Net Export at Feeder Level (In MU)	T&D losses	AT&C losses	% Data Received through Automatically (if feeder AMR/AMI)	Remarks
1	KDHP	48.14	48.14	48.14	KDHP Switching Station	Nil	Madupatty	Mixed	Others	8.04	10.14	-2.1			nil	2 MW Hydel generation was connected hence 4.57 million units were pumped in this feeder in the year 2020-21
2	KDHP	48.14	48.14	48.14	KDHP Switching Station	Nil	Nayamakad	Mixed	Others	15.79	6.51	9.28			nil	
3	KDHP	48.14	48.14	48.14	KDHP Switching Station	Nil	Pullivasal	Mixed	Others	2.82	2.67	0.15			nil	
4	KDHP	48.14	48.14	48.14	KDHP Switching Station	Nil	ITD	Mixed	Others	8.03	7.05	0.98			nil	
5	KDHP	48.14	48.14	48.14	KDHP Switching Station	Nil	Station	Auxiliary & Residence	Others	0.01	0	0.01			nil	
6	KDHP	48.14	48.14	48.14	KDHP Switching Station	Nil	Town	Mixed	Others	7.05	4.71	2.34			nil	
7	KDHP	48.14	48.14	48.14	KDHP Switching Station	Nil	Nettigudi	Mixed	Others	10.39	10.77	-0.38			nil	

Please refer letter No EG10/1337 dated 3rd December 2021