

STATUTORY INSTRUMENT NO. OF 2024

The Electricity Act, 2019
(Act No. 11 of 2019)

The Electricity (Net Metering) Regulations, 2024

ARRANGEMENT OF REGULATIONS

Regulation

PART I
PRELIMINARY PROVISIONS

1. Title
2. Interpretation
3. Application and non-application
4. Grid code relating to distribution
5. Categorisation of generation capacity

PART II
APPLICATION AND APPROVAL OF NET METERING

6. Consumer intending to be prosumer
7. Development of net metering application form
8. Application and approval of prosumers
9. A distribution enterprise to limit the size of its net metering programme
10. Registers by distribution enterprise
11. Capacity for proposed net metering generation shall be lost if not operational

PART III

CHARGES FOR CONNECTING TO AND USING THE DISTRIBUTION SYSTEM

12. Connection charges
13. Charges for use of distribution system

PART IV

TECHNICAL OPERATION OF COMMERCIAL AND LEGAL REQUIREMENTS OF NET METERING GENERATION

14. Operating net metering generation
15. Accessibility of net metering meter
16. Ownership and cost bearing for net metering meters
17. Post- and pre-paid net metering meters
18. Supply point

PART V

MONITORING AND CONTROL OF NET METERING GENERATION

19. Monitoring of a net metering generation
20. Control of a net metering generation

PART VI

BILLING PROCESS, TARIFFS FOR NET METERING GENERATION EXPORTS, AND RECONCILIATION AND CLEARING

21. Metering and billing process and settlement
22. Tariff for exports
23. Annual reconciliation and clearing of imbalances

PART VII

GENERAL PROVISIONS

24. National database of net metering
25. Non-compliance with Regulations
26. Appeals
27. Transitioning of an existing generation station to net metering generation
28. Status of existing consumer supply and connection agreements
29. Savings and transitional provisions

SCHEDULE

IN EXERCISE of the powers contained in section 52 of the Electricity Act, 2019, the following Regulations are made:

**PART I
PRELIMINARY PROVISIONS**

Title

1. These Regulations may be cited as the Electricity (Net Metering) Regulations, 2024.

Interpretation

2. In these Regulations, unless the context otherwise requires -

“connection charge” means a charge recouped from the customer for a cost of providing new or additional capacity, whether or not new investment is required;

“consumer” has the meaning assigned to the word in the Act;

“dispatchable” means the ability of a generating station to receive specific instructions to achieve specific active and reactive power outputs within registered data parameters or declared availability and by stated times;

“distribution” has the meaning assigned to the word in the Act;

“distribution enterprise” means a licensee, who holds a distribution licence;

“distribution system” has the meaning assigned to

the words in the Act;

“embedded” means a generating plant connected to, and operating parallel with, the distribution system of a distribution licensee;

Act No.12 of 2019

“energy” has the meaning assigned to the word in the Energy Regulation Act, 2019;

Act No.12 of 2019

“Energy Regulation Board” means the Energy Regulation Board established under the Energy Regulation Act, 2019;

“export” means the gross energy injected into a distribution system at a supply point by a prosumer from the prosumer’s net metering generation, supplied to a distribution enterprise;

“grid code” has the meaning assigned to the words in the Act;

“import” means the energy drawn from a distribution system by a consumer to meet the consumer’s demand, supplied by a distribution enterprise;

Act No.12 of 2019

“licensee” has the meaning assigned to the word in the Energy regulation Act, 2019;

“net metering” means a methodology under which electricity is produced from a net metering generation on particular premises and used by a prosumer at the same premises, and any electricity generated but not consumed is exported;

“net metering connection agreement” means an agreement between a distribution enterprise and prosumer to facilitate connection of the prosumer’s net metering generation to a distribution system;

“net metering generation” means a generation station, owned by a prosumer, for producing electricity, including any associated building, plant, machinery or accessories, using a non-dispatchable renewable energy technology, for the purpose of supplying a prosumer’s own load, and the phrase “net-metering generation” shall be used for intended or proposed net-metering generation;

“net metering supply agreement” means an agreement entered into between a distribution enterprise and a prosumer to facilitate billing;

“non-dispatchable” means the inability or limited ability of a generating station to receive specific instructions to achieve specific active and reactive power outputs within registered data parameters or declared availability and by stated times;

“prosumer” means a consumer who participates in net metering;

“supply point” means a point at which energy from a prosumer’s net metering generation is considered to be supplied to a distribution enterprise;

“system operator” has the meaning assigned to the words in the Act; and

“wheeling” means transporting electricity from a net metering generation located on one premise to a prosumer who owns that net metering generation but is located at other premises, using either a distribution enterprise’s system or a direct line constructed for the purpose of connecting the net metering generation and the prosumer’s load.

Application and non-application

3. (1) These Regulations shall apply to -
 - (a) a distribution enterprise and a prosumer, on the interconnected power system; and
 - (b) non-dispatchable energy from a renewable energy technology.
- (2) These Regulations shall not apply to-
 - (a) a non-renewable energy technology;
 - (b) dispatchable energy from a renewable energy technology;
 - (c) a net metering generation exceeding medium scale embedded generation installation capacity referred to under

regulation 5.

(3) A prosumer who does not demand and use energy from the distribution enterprise for a consecutive period of ninety days shall, a day after, cease to be a prosumer.

(4) A distribution enterprise may not financially compensate a prosumer referred to under subregulation (3), for any export made after the ninety days referred to under subregulation (3).

Grid code relating
to distribution

4. A distribution enterprise and prosumer shall be bound by the provisions of the grid code relating to distribution.

Categorisation of
generation capacity

5. Net metering generation capacities shall, for the purpose of the grid code relating to distribution, be categorised as follows:

- (a) micro embedded generation installation, if the nameplate total capacity rating does not exceed two kilo-watts;
- (b) mini embedded generation installation, if nameplate total capacity rating exceeds two kilo-watts, up to ten kilo-watts single phase, or thirty kilo-watts three phase;
- (c) small scale embedded generation installation, if the total registered capacity exceeds ten kilo-watts single phase or thirty kilo-watts three phase, up to one mega-watt; or

- (d) medium scale embedded generation installation, if the total registered capacity exceeds one mega-watt, up to five mega-watts.

PART II

APPLICATION AND APPROVAL OF NET METERING

Consumer
intending to be
prosumer

6. (1) A consumer who intends to be a prosumer shall enter into a separate net metering supply agreement and net metering connection agreement with a distribution enterprise.

(2) A distribution enterprise shall offer on a transparent, non-discriminatory, first-come first-served, basis, net metering to a consumer who intends to be a prosumer.

(3) A consumer shall apply for net metering generation capacity that is sufficient to not exceed the consumer's approved maximum demand capacity from the grid by a distribution enterprise.

Development of net
metering
application form

7. (1) A distribution enterprise shall develop a net metering generation application form which shall contain the following information:

- (a) key administrative and technical aspects of the application process; and
- (b) data required from a consumer by a distribution enterprise to render an

application as having sufficient and relevant information.

(2) A distribution enterprise shall submit the application form referred to under subregulation (1) to the Energy Regulation Board for approval.

Application and
approval of
prosumers

8. (1) A consumer who intends to be a prosumer shall apply to a distribution enterprise for net metering, in the geographical area in which the intended net metering generation will be installed, using the form referred to under regulation 7 on payment of an administrative fee determined by the distribution enterprise.

(2) A fee charged under subregulation (1) shall be approved by the Energy Regulation Board.

(3) A distribution enterprise may approve or reject an application made under subregulation (1).

(4) A distribution enterprise shall, where the distribution enterprise rejects an application under subregulation (2), state the reasons for the rejection.

(5) A distribution enterprise shall, where the distribution enterprise approves a consumer's application who meets the requisite criteria enter into a net metering supply agreement with a prosumer.

(6) The agreement referred to under subregulation (5) shall state the -

(a) manner in which the energy bill for imbalances and reconciliations referred

to under regulation 23 shall be settled between a distribution enterprise and a prosumer;

- (b) distribution enterprise's right to inspect a net metering generation and to read a meter;
- (c) periodic estimated quantity of exports and their scheduling;
- (d) payment terms for exports;
- (e) duration of the agreement;
- (f) terms for renewal or extension of the agreement; and
- (g) damages for breach of the agreement.

A distribution enterprise to limit size of its net metering programme

9. (1) A distribution enterprise shall offer a net metering programme to its consumers, of a size equal to ten percent of its historical highest peak demand.

(2) A distribution enterprise may not consider a consumer for net metering, if the net metering programme size referred to under subregulation (1) becomes full.

(3) Despite subregulation (2), a distribution enterprise shall consider for net metering a consumer whose net metering generation capacity does not exceed fifteen kilo-watts single-phase or twenty-six kilo-watts three-phase.

10. (1) A distribution enterprise shall keep and maintain the following registers which shall be open for inspection by members of the public during normal office hours:

- (a) a register of prosumers in Form I set out in the First Schedule;
- (b) a register of rejected net metering generation applications in Form II set out in the First Schedule; and
- (c) a register of the distribution enterprise's latest available net metering programme capacity in Form III set out in the First Schedule.

(2) A distribution enterprise shall update the registers referred to under subregulation (1)(a) and (b) immediately a consumer is approved as a prosumer or a net metering generation application is rejected.

(3) A distribution enterprise shall submit the registers referred to under subregulation (1)(a) and (b) to the Energy Regulation Board by the second week of each quarter in each year, and at any time that the Energy Regulation Board may request.

(4) A distribution enterprise shall submit the registers referred to under subregulation (1)(c) to the Energy Regulation Board by the first day in each quarter in each year, and at any time that the Energy Regulation Board may request.

Capacity for
proposed net
metering generation
cancelled or
withdrawn if not
operational

11. (1) A prosumer shall automatically lose and have withdrawn, the approved capacity allocated for the prosumer's proposed net metering generation by a distribution enterprise, if the net metering generation does not become operational within ninety days after the operational date agreed in the agreement with a distribution enterprise.

(2) A distribution enterprise shall establish and maintain a register of net metering generation capacities cancelled or withdrawn referred to under subregulation (1) in Form IV set out in the First Schedule.

(3) A distribution enterprise shall update the register referred to under subregulation (2) for any net metering generation capacity allocation that is cancelled or withdrawn in accordance with subregulation (1).

PART III

CHARGES FOR CONNECTING TO AND USING THE DISTRIBUTION SYSTEM

Connection charges

12. (1) A distribution enterprise shall not levy a connection charge for connecting a net metering generation.

(2) Despite subregulation (1), a distribution enterprise may levy a connection charge in accordance with the provisions of the grid code relating to distribution-

(a) if connecting a net metering generation
would necessitate network

augmentation; and

- (b) on a wheeling prosumer.

Charges for use of
distribution system

13. (1) A distribution enterprise may levy a distribution use of system charge on a wheeling prosumer.

(2) A charge levied in accordance with subregulation (1)-

- (a) shall be regulated and approved by the Energy Regulation Board;
- (b) shall be expressed in per kilo-watt-hour;
- (c) shall be paid by a prosumer through the prosumer's regular bills or purchase from a distribution enterprise; and
- (d) may not exceed fifty percent of tariff 3 referred to under regulation 22.

PART IV

TECHNICAL OPERATION, COMMERCIAL AND LEGAL REQUIREMENTS OF NET METERING GENERATION

Operating net
metering generation

14. (1) A prosumer shall operate a net metering generation in accordance with the operating requirements and arrangements of the grid code relating to distribution.

(2) A prosumer shall, in addition to the requirements under subregulation (1), operate and maintain a net metering generation with a visibly open, lockable manual or motorised, and clearly labelled switch,

to prevent the net metering generation from back-feeding a de-energised distribution system line.

Accessibility of net metering meter

15. (1) A distribution enterprise shall install a net metering meter in a manner that it is clearly marked and easily accessible.

(2) A distribution enterprise shall, for the purpose of repair, service, maintenance, replacement or physical meter reading or verification, have the right to access a net metering meter on any working day during normal working hours.

Ownership and cost bearing for net metering meter

16. (1) A net metering meter shall be the property of a distribution enterprise.

(2) Subject to subregulation (1), the cost for a meter shall be borne by a prosumer, including the cost for procuring, delivering and installing the meter at the designated metering point.

Post-and pre-paid net metering meters

17. (1) A net metering meter referred to under this Part shall be post-paid or pre-paid.

(2) The specifications and manner in which a pre-paid and post-paid net metering meter is operated shall be as provided under the metering requirements of the grid code relating to distribution.

(3) A post- or pre-paid net metering meter shall have the ability to meter the residual energy supplied from

the distribution system, and the exports.

(4) A full four quadrant meter shall, where active and reactive energy may flow in both directions at the metering point, be installed for a net metering generation.

Supply point

18. (1) The supply point shall be the point where the net metering generation meter is installed.

(2) A distribution enterprise shall assume ownership of exports at the supply point.

PART V MONITORING AND CONTROL OF NET METERING GENERATION

Monitoring of net
metering generation

19. (1) A prosumer shall regularly monitor a net metering generation and ensure reliable operation and generation.

(2) Subject to subregulation (1), a prosumer shall ensure a net metering generation exceeding thirty kilo-watts has the capability to facilitate remote monitoring of energy flows by a distribution enterprise.

Control of net
metering generation

20. (1) A prosumer shall ensure that a net metering generation is controlled, for the purpose of enabling the management of system frequency stability by a system operator.

(2) A prosumer shall ensure a net metering generation is capable of being controlled by a system operator in accordance with the operating requirements

and arrangements of the grid code relating to distribution.

(3) A net metering generation whose capacity is up to two hundred and fifty kilo-watts shall, where a net metering generation is not controlled by a system operator, be equipped with a demand response enabling device to enable a distribution enterprise curtail the exports from the net generation.

(4) The demand response enabling device referred to under subregulation (3) shall be capable of enabling the curtailment of a net metering generation at discrete levels of one hundred percent, seventy percent, thirty percent or zero percent of the registered capacity.

(5) A prosumer with a net metering generation capacity of less than thirty kilo-watts shall-

- (a) permanently limit the export at seventy percent of the net metering generation capacity; or
- (b) install a demand response enabling device capable of curtailing generation to zero percent of the registered capacity.

PART VI
BILLING PROCESS, TARIFFS FOR NET METERING
GENERATION EXPORTS, RECONCILIATION AND
CLEARING

Metering and billing
process and
settlement

21. (1) Billing for net metering shall maintain the same billing cycle of an existing standard supply agreement between a prosumer and a distribution enterprise.

(2) Reconciliation of a net metering bill and bill under the existing consumer supply agreement referred to under subregulation (1) shall be done in accordance with regulation 23.

(3) A distribution enterprise shall incorporate in its metering and billing process, both the monetary value for imports and exports.

(4) The metering and billing process referred to under subregulation (3) shall be done as follows:

- (a) a distribution enterprise shall credit a prosumer's pre-paid meter account with an amount of money corresponding to a value of an export, whenever the net metering generation meter registers an export, and the net money tendered by a prosumer to purchase subsequent pre-paid energy shall be less the value of the money credited for the exports on the pre-paid meter account; and
- (b) a distribution enterprise shall, for the

billing period, charge a post-paid metered prosumer for imports in the usual manner, but the net payable invoice amount shall be less the monetary value of the exports.

Tariff for export

22. (1) The reference tariff for exports shall be determined by the Energy Regulation Board annually in accordance with the Second Schedule.

(2) The reference tariff for exports shall be published by the Energy Regulation Board in the last month of each year, and shall be used by a distribution enterprise and prosumer in the following year.

(3) The actual tariff to be applied by a distribution enterprise for billings set out in regulation 21 and reconciliations set out in regulation 23 shall be as follows:

- (a) tariff 1, if a prosumer's annual total export in year N-1 is up to fifty percent of the annual total gross generation from the prosumer's net metering generation in year N-1, the applicable tariff in year N shall be one hundred percent of the reference tariff referred to under subregulation (1);
- (b) tariff 2, if a prosumer's annual total export in year N-1 is more than fifty percent, up to seventy five percent of the annual total gross generation from the prosumer's net metering

generation in year N-1, the applicable tariff in year N shall be seventy five percent of the reference tariff referred to under subregulation (1); and

- (c) tariff 3, if a prosumer's annual total export in year N-1 exceeds seventy five percent of the annual total gross generation from the prosumer's net metering generation in year N-1, the applicable tariff in year N shall be fifty percent of the reference tariff referred to under subregulation (1).

(4) A prosumer shall, by the fifteenth of December in each year, report to a distribution enterprise, the following metering data, in kilo-watt-hours, for the period fifteenth December of the previous year to thirtieth November of a current year:

- (a) total imports.
- (b) total exports.
- (c) gross energy produced from a net metering generation.

(5) Despite the periods for submission of energy data as provided under subregulation (3), tariff 1, tariff 2 and tariff 3 referred to under subregulation (2) shall be effected and be in force for twelve months from the first day of January of year N.

- (6) In this regulation -
"year N" means a year under consideration;
and

“year N-1” means a year proceeding the year under consideration.

Annual
reconciliation and
clearing of
imbalances

23. (1) Subject to regulation 22, a distribution enterprise shall reconcile a prosumer’s exports in a year ended.

(2) A distribution enterprise shall conclude the reconciliations referred to in subregulation (1) within thirty days of receipt of the report referred to in regulation 22(4).

(3) An imbalance between the reconciliation undertaken in accordance with subregulation (1) and a payment to a prosumer as provided in regulation 21 shall be cleared with its own separate billing process.

(4) Despite the generality of subregulation (3), a bill shall be cleared monetarily within a period which shall be set out in the net metering supply agreement referred to in regulation 8(5).

(5) The clearance mechanism referred to in subregulation (4) shall include an option for a prosumer to have the right to offset an imbalance export value against any current or future invoices or imports.

PART VII
GENERAL PROVISIONS

National database
of net metering

24. The Energy Regulation Board shall establish, maintain and consolidate a national database of net metering based on data submitted by distribution enterprises in accordance with regulation 10.

Non-compliance
with Regulations

25. A person who participates in net metering generation in contravention of these Regulations commits an offence and is liable, on conviction, to a fine not exceeding three hundred thousand penalty units or to imprisonment for a term not exceeding three years, or to both.

Appeals

26. (1) A consumer who is aggrieved with a decision by a distribution enterprise made under these Regulations may, within thirty days of receipt of a decision by a distribution enterprise, appeal to the Energy Regulation Board.

(2) Despite the generality of subregulation (1), the resolution of a dispute, or an appeal, relating to the connection to, or with, the distribution system shall be undertaken in accordance with the mechanism provided under the grid code relating to distribution.

Status of existing
consumer supply
and connection
agreements

27. These Regulations do not, and shall in no way be read or taken as to mean to, modify, affect or change any existing or required agreements between a

consumer and a distribution enterprise for a distribution enterprise's connection of a consumer's load to, and supplying it with electricity from, a distribution system which is part of the Republic's interconnected power system, except to the extent of how the existing or required agreements are referred to in these Regulations.

Savings and
transitional
provisions

27. (1) A generation station existing before the commencement of these Regulations shall be classified as a net metering generation, where a consumer who owns the generation station satisfies the requirements of these Regulations.

(2) A distribution enterprise shall, for the period of one year from the commencement of these Regulations, apply tariff 1 up to thirty-first December for the billings set out in regulation 21 and reconciliations set out in regulation 23, for a new prosumer.

FIRST SCHEDULE
(Regulations 10 and 11)

Form 1
(Regulation 10(1)(a))

The Electricity Act
(Act No. 11 of 2019)

The Electricity (Net Metering) regulations, 2024

Register of Prosumers

		Prosumer-1	Prosumer-2	Prosumer-N
A.	Prosumer Details			
1.	Name			
2.	Address			
3.	Date applied for net metering			
4.	Date on which application was approved			
5.	Date on which approval was communicated			
B.	Net Metering Generation Details			
1.	Resource type			
2.	Commissioning date			
3.	Operational date			
4.	Capacity (in kW)			
5.	Total exports year-to-date (kWh)			
6.	Location (area and geo-coordinates)			
7.	Name of associated substation			
8.	Name of associated distribution line			

The Electricity Act
(Act No. 11 of 2019)

The Electricity (Net Metering) Regulations, 2024

Register of rejected net metering generation applications

		Consumer-1	Consumer-2	Consumer-N
A.	Consumer Details			
1.	Name			
2.	Address			
3.	Date applied for net metering			
4.	Date on which application was rejected			
5.	Date on which rejection was communicated			
B.	Details of Rejected Intended Net Metering Generation			
1.	Intended resource type			
2.	Intended operational date			
3.	Intended Capacity (in kW)			
4.	Location (area and geo-coordinates)			
5.	Name of associated substation			
6.	Name of associated distribution line			
7.	Reason(s) for rejection			

The Electricity Act
(Act No. 11 of 2019)

The Electricity (Net Metering) Regulations, 2024

Register of the distribution enterprise's latest available net metering programme capacity

Net metering generation					
S.N	Details	Location	Resource	Operational Date	Capacity (kW)
A.	Participating Prosumer Capacities				
1.	Prosumer-1 (name and address)				
2.	Prosumer-2 (name and				

C.	Reclaimed Capacities (from Schedule 5)				
1.	Consumer-1 (name and address)				
2.	Consumer-2 (name and address)				
n.	Consumer-N (name and address)				
X	Sub-total-C				
Y	Net metering programme size (@10% of distribution enterprise's highest historical peak demand)	n/a	n/a	n/a	
Z	Latest available net metering program capacity as at [dd.mm.yy] (Z=V-W-X-Y)	n/a	n/a		

The Electricity Act
(Act No. 11 of 2019)

The Electricity (Net Metering) Regulations, 2024

Register of net metering generation capacities cancelled or withdrawn

		Consumer-1	Consumer-2	Consumer-N
A.	Consumer Details			
1.	Name and address			
2.	Date applied for net metering			
3.	Date on which application was approved			
4.	Date on which approval was communicated			
B.	Details of Net Metering Generation whose Allocated Capacity is Cancelled			
1.	Resource type			
2.	Capacity (in kW)			
3.	Location (area and geo-coordinates)			
4.	Name of associated substation			
5.	Name of associated distribution line			
6.	Agreed operational date			
7.	Date on which the allocated capacity was cancelled and withdrawn			

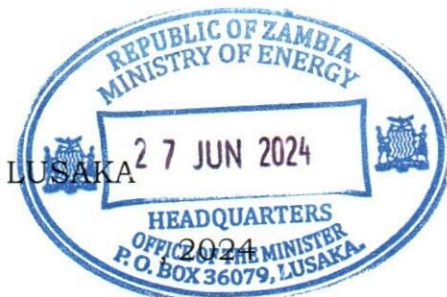
SECOND SCHEDULE

(Regulation 22)

Determination of reference tariff for exports from net-metering generation

The reference tariff shall be determined in accordance with the following procedure:

- (a) a generation licensee shall calculate the monthly incremental cash costs for all the generation licensee's hydropower stations, for a period of twelve months commencing November of the previous year, and shall compute the weighted average incremental cash costs over such twelve months period, based on the actual capacity factor of the power station.
- (b) a licensee shall then rank, in accordance with the principles of the merit order, the incremental cash costs of power stations, detailing and clearly showing the underlying technical data, cost accounting data, calculations and ranking.
- (c) a licensee shall submit the data referred to in (b) to the Energy Regulation Board by 30th November of each year, for validation and approval by the Energy Regulation Board.
- (d) the reference tariff for exports for the following year shall be the short run marginal cost of production of that of a hydroelectric power station with the lowest incremental cash costs in the reference period.
- (e) the Energy Regulation Board shall validate and approve the calculations of the submissions referred to in (c) and publish on its website the reference tariff referred to in (d) for the following year by 31st December of each year.



LUSAKA

[27 / 06 / 24]

A stylized handwritten signature in black ink, consisting of several loops and a long horizontal stroke.

Minister of Energy