

The Energy Regulation Act 2019

(Laws, No. 12 of 2019, Page 345)

Net-Metering Regulation

In exercise of the powers contained in section 54 of the Energy Regulation Act 2019, the following regulations are hereby made by the Minister of Energy.

Schedule

Preamble	1
1. Title	2
2. Definitions	2
3. General	4
4. Eligible technologies and generation capacity limits.....	5
5. Licensing and Connection Agreement	6
6. Prosumer application process	7
7. Implementation of a net-metering generation	9
8. Cost of grid connection for net-metering generation.....	9
9. Grid connection and operations	10
10. Tariffs, Compensation and Billing	11
11. Monitoring, Control, Information and Reporting.....	13
12. Operatorship and Ownership of net-metering generation	14
13. Clearing.....	15
Schedule 1	16

Preamble

- (1) These Regulations shall regulate the reciprocal obligations of the licensed enterprises that need, or qualify to facilitate, net-metering on one hand, and the consumers involved in net-metering on the other hand.
- (2) The Regulations provide for the following:
 - (a) the minimum requirements for net-metering generation connection to transmission or distribution system
 - (b) the minimum net-metering supporting requirements for TNSP or DNSP and the licensed transmission or distribution enterprise to whom surplus exports are made, or need to be made, by the prosumer
 - (c) that the obligations of net-metering generation and the prosumer, the TNSP or DNSP, and the licensed transmission or distribution enterprise to whom

surplus exports are made, are defined to ensure the integrity, and safe and efficient operation of the power system.

(3) These Regulations shall:

- (a) ensure that net-metering generations are implemented in compliance with the provisions of the *Zambian Electricity (Grid Code) Regulations, 2013*, *The Zambian Distribution Grid Code, 2016* and all relevant technical Zambian standards, codes and any directives that may be issued by the ERB from time to time
- (b) facilitate access, on agreed standard terms, to all qualifying net-metering generation wishing to connect to or use the transmission or distribution system for net-metering purposes
- (c) set for the principles of non-discrimination to any qualifying net-metering generation through the provision of consistent and transparent principles, criteria and procedures for connecting to the transmission or distribution system and in implementing net-metering tariffs.

1. Title

(1) These regulations may be cited as the Net-Metering Regulation.

2. Definitions

(1) Any word or expression to which a meaning has been attached in the Energy Regulation Act and the Electricity Act shall have that meaning and, unless the context otherwise indicates -

“**certified electrician**” is a licensed electrician who holds certifications to work in specific industries or businesses and registered at the distribution or transmission network service provider to connect equipment to the transmission or distribution system.

“**commercial supply point**” means in this regulation the point at which the ownership of the electricity is transferred from the seller to the buyer, which is in case of net-metering and wheeling the meter on the site of generation.

“**consumer**” has the meaning assigned in the Electricity Act;

“**ERB**” means the Energy Regulation Board established under part II of the Energy Regulation Act, 2019;

“**Electricity Act or EA**” means the Electricity Act 2019 (Act No. 11 of 2019)

“**Energy Regulation Act or ERA**” means the Energy Regulation Act, 2019 (Act No. 12 of 2019)

“equipment” has the meaning assigned in the Electricity Act;

“direct line” means a methodology under which electricity is generated by a prosumer on a geographically separated facility, which is owned by the prosumer and is directly delivered by a privately-owned local distribution or transmission system, for which the prosumer has the right of access and use, and supplied to the same prosumer at another geographically separated facility for storage or own consumption (direct line).

“grid connection assessment” means a verification, if the proposed equipment for the generation and the installation design is certified for the use in Zambia and the equipment cannot export more energy into distribution or transmission system than up to 30 kVA at the specified grid connection point on the premises of the prosumer.

“grid connection capacity” means the rating of the terminal equipment at the grid connection point.

“grid connection point” means the electrical node on a distribution or transmission system where a prosumer physically connects the net-metering generation assets to the distribution or transmission system.

“distribution system impact assessment” means a study according to the Distribution Grid Code or Grid Code, if the proposed equipment for the generation and the installation design is certified for the use in Zambia and the equipment cannot export more energy into distribution or transmission system than up to 250 kVA at the specified grid connection point in point or closest transformer.

“full system impact study” means a study according to the Distribution Grid Code, if the proposed equipment for the generation and the installation design is certified for the use in Zambia and the equipment cannot export more energy into the distribution or transmission system as limited by the closest substation.

“incremental cost” means the incremental generation cash cost of a production of electricity from dammed hydro power in Zambia calculated on a 80% capacity utilization rate; the incremental generation cash cost refer to the change in cash cost, if the generation of electricity is increased or decreased from such 80% capacity utilization rate by 1 MW, when the distribution or transmission network service operator of electric energy purchases electricity from prosumers; the incremental generation cash cost from all dammed hydro power are ranked according the merit order and the incremental generation cash cost from the capacity with the highest incremental cash cost determine the incremental cost for the purpose of this regulation;

“merit order” means a way of ranking available energy generation capacities (as described in kW) in Zambia, based on ascending order of their short-run incremental generation costs of production (as described in USD/kWh);

“net-metering” means a methodology under which electricity is generated and consumed by a prosumer at the same geographic facility and a surplus is supplied to the local distribution or transmission facilities of a distribution or transmission licensee and may be used to offset electric energy provided by the distribution or transmission licensee to the prosumer during an applicable billing period; the term net-metering is

used for net-metering and for wheeling, unless the context of the text stipulates differently.

“net-metering generation” means any grid connected generation station for generating electricity including a building, plant, machinery or accessories used for the purpose of generating electricity by the use of renewable energies for the purpose to self-supply of the prosumer; the term net-metering generation is used for net-metering and for wheeling generation, unless the context of the text stipulates differently.

“producer” has the meaning assigned in the Electricity Act;

“prosumer” means any consumer of electricity who consumes energy from the connected distribution or transmission system and produces and stores electricity with his net-metering generation on his premises for his own supply and exports a surplus of electricity in the event more energy is produced than consumed; or means a person supplying or being supplied electricity by a transmission or distribution system operator;

“third party ownership” means a person from Zambia or abroad, who legally owns net-metering capacities and who signs an agreement with the prosumer, which allows to legally use the net-metering capacities for the purpose of this regulation. Third party ownership excludes any activities as mentioned in the Electricity Act;

“wheeling” means a methodology under which electricity is generated and consumed by a prosumer, whereas the generation facility is geographically separated from the consumption and the generated energy is delivered by the local distribution or transmission system of a distribution or transmission licensee or a direct line from the generation facility to the consumption facility; produced and consumed energy are offset during an applicable billing period;

“ZDGC” means the *Zambian Distribution Grid Code* (May 2016)

- (2) Unless otherwise specified, in this regulation:
- (a) words importing any one gender includes the other gender and the singular includes the plural and vice versa;
 - (b) words or expressions used in this regulation but not defined shall have the same meanings respectively assigned to them in the Act;
 - (c) any reference to a statute or statutory provision includes a reference to that provision as amended, re-enacted or replaced and any regulations or orders made under such provisions from time to time; and
 - (d) if the date on which an event is scheduled to occur by this regulation is a day which is not a business day, then the event shall be deemed to occur on the next business day.

3. General

- (1) The Net-Metering Regulation regulates the relation between a licensee to supply energy and / or a distribution or transmission network provider with a prosumer. The

Net-Metering Regulations applies to all licensees, distribution or transmission network provider and licensed prosumers in the Republic of Zambia.

- (2) All licensees and distribution or transmission network service provider shall offer net-metering subject to this regulation and other applicable Zambian laws, rules and regulations –
 - (a) Licensees with a license to supply electricity shall conclude with a consumer, who wish to connect a net-metering-generation an agreement to purchase the exports of electricity;
 - (b) Distribution or transmission network service providers shall conclude with a consumer, who wish to connect a net-metering-generation an agreement, which describes the requirements to connect a net-metering generation and to connect after commissioning the net-metering generation to their electricity system.
- (3) Net-metering generation shall be applicable and is only allowed for generation of electricity whose purpose is the supply of a specific consumer’s electrical consumption and power demand. Net-metering generation is not and shall not be a commercial activity as construed under the Electricity Act.”
- (4) All consumers of electricity are entitled to apply for a net-metering-generation to supply their own demand by own generation and to sell their export of electricity (a net surplus of electricity) at a regulated price as prescribed by the ERB. The licensee will net the monetary value of the exports from the invoice of supply (net-billing) in the prescribed period.
- (5) The net-metering generation of a prosumer is limited to generation of electricity with renewable energy technologies.
- (6) Prosumer comply with their undertaking of net-metering generation to the technical requirement as prescribed in the connection agreements with the distribution or transmission network service provider.
- (7) The prosumer forfeits his right to this regulation if he no longer consumes electricity for a consecutive period of 90 calendar days. In such cases, the prosumer will become then a producer and will be regulated by the embedded generation regulation as prescribed by the ERB.

4. Eligible technologies and generation capacity limits

- (1) All renewable energy technologies for the generation of electricity are eligible for net-metering generation including but not limited to, facilities for the generation of electrical energy that uses solar PV, wind, hydro, geothermal, biomass, biogas, biofuel, or fuel cell resources, when the fuel for the fuel cell was produced with net carbon free energy.

- (2) The consumer can apply for a net-metering generation up to the capacity of his grid connection capacity and beyond the capacity of his grid connection capacity.
- (3) Applied net-metering generation capacities shall not consider no operating generation reserve.

5. Licensing and Connection Agreement

- (1) Prosumer's main purpose of the net-metering generation is the self-supply of prosumers electrical consumption and demand and net-metering generation is not considered to be a commercial activity.
 - (a) Consumer applying for a net-metering generation at a capacity below two hundred and fifty kilowatts need to register their undertaking at the ERB via the application process at the distribution or network service operator and are exempted licensing by the Act;
 - (b) Consumer applying for a net-metering generation at a capacity of two hundred and fifty or more kilowatts need to register their undertaking at the ERB via the application process of the distribution or transmission network service operator and are exempted from licensing, when they apply for a net-metering generation capacity within the grid connection capacity of their facility, where energy is consumed;
 - (c) Consumers applying for a net-metering generation at a capacity of two hundred and fifty or more kilowatts, and that capacity exceeds the current grid connection capacity of the facility, where the energy is consumed, shall apply for a licence at the ERB according to Energy Regulation (General) Regulations, 2021 (SI 42) and with such provisional license of their new undertaking register their undertaking via the application process of the distribution or transmission network service operator.
- (2) In cases of 6(1)(a) and (b) the distribution or transmission network service operator is authorized to process the application, sign a net-metering generation connection agreement and connect the net-metering generation to the grid. In case of 6(1)(c) the distribution or transmission network service is authorized to process the application, when the ERB has issued a provisional licence.
- (3) In case the prosumer operates his net-metering generation under the regulation as prescribed in (1)(c) and the demand of the prosumer increased to the level of the grid connection capacity as described in the license agreement, the prosumer can opt to be regulated as prescribed in (1)(b) and surrender his net-metering generation license or continue with his operation according the license conditions.
- (4) Prosumers need to meet the provisions, requirements and technical standards for –
 - (a) feasibility studies as prescribed in the EA,
 - (b) environmental impact studies as prescribed by the Environmental Management Act, 2011 and
 - (c) the construction of ground mounted generation installation,

where applicable.

- (5) Prosumer need to comply with provisions of generation and supply as laid out in the EA and the codes.
- (6) Subject to the fulfilments of the requirements as laid out under 6.(4) and 6.(5) the approval according to 6(1)(a) and (b) and the license according to 6(1)(c) entitles the prosumer to install, to grid connect, to operate a net-metering generation on his facility and to supply his (net) exports with a transfer of ownership and risk to the distribution or transmission network service operator at the metering unit of the prosumer.
- (7) Prosumer pay for license application fees for the net-metering generation and for annual licence fees as prescribed by the ERB is after the annual reconciliation of gross turnover for net exports with the distribution or transmission network service operator.
- (8) The distribution or transmission network service operator establish a standard net-metering generation connection agreement and for the supply of the (net) exports from the prosumer to the licensee and distribution or transmission network service operators, whereas the following terms shall relate to the net-metering activity –
 - (a) the technical requirements for the net-metering generation equipment;
 - (b) the conditions of the physical connection of the net-metering generation;
 - (c) the right of way to inspect the net-metering generation and to read the meter;
 - (d) the obligations to operate the net-metering generation;
 - (e) the obligation to hold a third liability to cover any damages from his generation and supply of electricity;
 - (f) the estimated quantity of the power surplus supply;
 - (g) the technical conditions and quality of supply;
 - (h) the estimated scheduling of power surplus supply;
 - (i) the responsible person for supply and receipt;
 - (j) the sanctions for breach of a contract;
 - (k) the payment terms or payment guarantees for the supply of electricity;
 - (l) the tariff and the tariff structure;
 - (m) the duration of the agreement;
 - (n) the review of the agreement.
- (9) The ERB has the right to audit the application process at the distribution or transmission network service operators and to withdraw the issued license from the prosumer or suspend non-licensed prosumer with immediate effect, when the requirements are not or no longer met by the prosumer.

6. Prosumer application process

- (1) The licensee and distribution or transmission service provider shall develop a standardized and cost-efficient approval process for those consumers, who wish to become prosumer within or beyond their existing grid connection capacity.

- (2) The distribution or transmission network service operator supplies sufficient and relevant information to support the application process of the prospective prosumer and vice versa.
- (3) The administrative application process for the connection of a net-metering generation at the distribution or transmission network service operator is free of charge for the consumer. The technical application process for the connection of a net-metering generation at the distribution or transmission network service operator is free of charge for the consumer for net-metering generation up to a capacity of the grid connection point, unless it requires a distribution system impact assessment or full impact study. Fees for the technical application process for net-metering generation requiring distribution system impact assessment or full impact study shall be prescribed by the ERB.
- (4) The distribution or transmission network service operator and the ERB may for the better carrying out of the application visit the net-metering generation site of the applicant. The cost associated with the site visited shall be paid by the applicant, when the distribution or transmission network service operator and the ERB can justify in writing the needs for a site visit and indicate the costs as prescribed by the ERB for the site visit.
- (5) The distribution or transmission network service operators implement standardized application processing in his organization. The processes may include, but not limited to –
 - (a) the use of standardized net-metering application form;
 - (b) as per prescription by the ERB the evaluation of connection requests and execution of a -
 - a. connection assessment for installations of up to 30 kVA
 - b. distribution system impact assessment for installation of more than 30 kVA and up to 250 kVA
 - c. full system impact study for installation beyond 250 kVA
 - (c) the evaluation, if the proposed equipment and design of the net-metering generation unit meets the technical standards;
 - (d) the placing or exchange of the metering units at the premises;
 - (e) the registration of the net-metering generation in a data base.
- (6) Prosumers apply for a grid connection at the distribution or transmission network service operator licensed for the geographic area, in which the net-metering generation will be installed and connected to the distribution or transmission system.
- (7) The transmission or distribution network service provider shall, within thirty days of receipt of the application approve or reject the application. With the approval of the application the distribution or transmission network service operators shall submit a standard net-metering generation connection agreement.
- (8) A transmission network or distribution network service provider shall notify an applicant of the rejection, in writing, stating the reasons for the refusal.
- (9) After reception of an approval the distribution or transmission network service operator reserves the applied net-metering generation capacity for a period of 180

calendar days. The reservation can be extended upon application for a maximum of 365 calendar days.

- (10) The distribution or transmission network service operators provide the prosumer relevant information needed for efficient access to the transmission system or distribution system, dispatching of electricity and determining the use of inter-connectors with the approval of the application.
- (11) Any changes of the approved net-metering generation design after commissioning requires approval from the distribution or transmission network service operators in the relevant described manner and form.

7. Implementation of a net-metering generation

- (1) After fulfilment of the requirements as prescribed in section 6 and 7, the prosumer is entitled to implement the net-metering generation.
- (2) The prosumer is entitled to request the physical connection of the net-metering generation to the transmission and distribution system, when the energy generator and his inverter or the generator and his rectifier are installed according the technical requirements of the connection agreements and such fulfilments is testified by a certified electrician or electrical engineer. The date of the testification is declaration of readiness for grid connection.
- (3) The distribution or transmission network service operators connects within a period of 30 calendar the net-metering generation and replaces the meter. After the connection to the system and replacement of the meter the prosumer can commence with the generation of electricity.

8. Cost of grid connection for net-metering generation

- (1) The cost for the potential upgrade of the grid connection to connect net-metering generation are carried out as the case may be –
 - (a) Consumer applying for connection of a net-metering generation within the existing or approved future capacity of their grid connection capacity shall not pay any costs associated with the potential upgrade of the transmission or distribution system to facilitate the connection of his net-metering generation.
 - (b) Consumer applying for connection of a net-metering generation beyond the existing or approved future capacity of their grid connection capacity shall pay the full costs directly associated with the potential upgrade of the transmission or distribution system to facilitate the connection of his net-metering generation. The distribution or transmission network service operator sends an estimate for the cost - with a binding period of 30 days - to the consumer and the consumer has to accept the estimate in writing.

- (2) Consumer shall be obliged to pay costs directly associated with connecting his net-metering generation to the transmission system or distribution system at the grid connection point. These costs shall be assessed on a non-discriminatory basis and be comparable with respect to other customers with similar load characteristics. The connection charge shall be approved by the ERB and shall include the cost of installation of a new meter -
- a. Consumer bear the cost for the replacement of the meter at the regulated value for the meter, when the useful life time of the meter is more than 6 months;
 - b. Distribution or transmission network service operator bears the cost to replace the meter, when the useful time of the metering unit is less than 6 months.

9. Grid connection and operations

- (1) The connection and operation of a net-metering generation to the transmission system or distribution system shall be in compliance with the specific provisions of the *Zambian Electricity (Grid Code) Regulations, 2013*, and the *Zambian Distribution Grid Code* and comply with other technical standards, codes and directives as issued by the ERB and prescribed for the embedded generation.
- (2) Net-metering generation capacities shall classify for the applicable technology aspects as follows -
- (a) a capacity of up to 30 kVA shall be classified as a micro-embedded or mini-embedded generation installation;
 - (b) a capacity above 30 kVA and up to 1,000 kVA shall be classified as a small-embedded generation installation;
 - (c) a capacity above 1,000 kVA and up to 10,000 kVA shall be classified as a medium-embedded generation installation;
 - (d) a capacity above 10,000 kVA shall be not be classified as embedded generation installation.
- (3) A net-metering generation shall be capable of operating in parallel and safely commencing the delivery of power into the distribution network at a single point of interconnection. To prevent a net-metering generation from back-feeding a deenergized line, a net-metering generation shall have a visibly open, lockable, manual, disconnect switch, which is accessible by the distribution licensee and clearly labelled. In addition, the following three (3) conditions shall cumulatively be met:
- (a) the net-metering generation must be designed to shut down or disconnect and cannot be manually overridden by the customer upon loss of utility power;
 - (b) the net-metering generation must be warranted by the manufacturer to shut down or disconnect upon loss of utility power; and
 - (c) the net-metering generation must be properly installed and operated, and inspected or tested in the presence of the distribution utility personnel before the first grid connection.
- (4) The point of supply for the net-metering generation on the electrical system is where electricity is supplied to a customer, who is in case of net-metering the distribution or transmission system operator; for the avoidance of doubts the point of supply for a -

- (a) net-metering prosumer is the bidirectional meter or the meter for the export on the site of the consumption;
 - (b) wheeling prosumer is the meter on the site of the generation.
- (5) Post-paid and pre-paid meters for net metered installations –
- (a) must meter (at least) the remaining import of energy and the export of energy to the distribution or transmission network service operator;
 - (b) can be a meter capable of measuring electricity flow in forward and reverse directions in 2 separate measuring units registers;
 - (c) must comply with technical requirements as prescribed by the ERB;
 - (d) must comply with technical standards for metering (e.g. ZS 647);
 - (e) are easily accessible and clearly marked in order to allow distribution licensee to take physically the meter readings. Prosumers must grant distribution or transmission network service operators access to their property at least once a month for the purpose of maintaining and/or reading their meter.
- (6) The quality of electricity supplied from and to the net-metering generation shall be in accordance with ZS 387 and ZS 397.
- (7) The distribution or transmission network service operator may install power quality measurement points at strategic locations close to distributed generation concentration areas, when required and in accordance with ZS 387 at his own cost.
- (8) The installation and maintenance of net-metering generation and wiring must be performed by competent personnel registered with Engineering Institution of Zambia or certified electrician or electrical engineers to comply with safety guidelines and technical standards.
- (9) Prosumers shall comply with the requirements to report incidents to the distribution or transmission network service operator and the ERB, as prescribed by the ERB.

10. Tariffs, Compensation and Billing

- (1) Tariffs for imports
 Import – licensee and distribution or transmission network service operator shall provide to prosumer electricity services for the import at non-discriminatory rates that are identical with respect to the retail tariff structure, retail rate structure, retail rate components, and any monthly charges to the rates that a prosumer would be charged, if he would still be a consumer.
- (2) Compensation for exports
- (a) Exports within the regulated period - electrical energy exports by prosumer to distribution or transmission network service operator shall be valued at the regulated and non-discriminatory value, which is valid at the day of declaration of readiness for grid connection, for a period of 120 months after effective connection to the network.
 The regulated value for net-metering exports –
 - a. applies to all eligible technologies for net-metering;

- b. will be published by the ERB;
- c. depends on the annual percentage of exports of the net-metering generation -

Range	Regulated Value for net-metering exports	Condition
i.	100%	Annual exports less than or equal to 50% of annual generation
ii.	75%	Annual exports more than 50% and less than or equal to 75% of annual generation
iii.	50%	Annual exports more than 75% of annual generation

d. refers to the total export quantity if a condition has been exceeded. The condition for the annual percentage of exports is calculated as part of the annual reconciliation for –

- i. net-metering prosumer: certified metered of annual export divided by certified metered of annual gross generation.
- ii. wheeling prosumer: computation of certified metered 15 min interval for exports and of certified metered 15 min interval for imports at both sites of the prosumer and accumulation of the 15 min interval net balances for the annual reporting period. Annual accumulated net (export) balance during supply time of generation divided by annual gross generation.

(b) Exports after the regulated period - electrical energy exports by net-metering-customers to distribution or transmission network service operator shall be valued at the monthly average market value, which is published by the Zambian energy exchange.

(2) Use of network for exports

(a) Prosumers operate a grid-connected net-metering generation and supply of energy to distribution or transmission network service operators. Distribution or transmission network service operator supply services for prosumers in terms of availability of the electricity network according to the Electricity Grid Code and the distribution or transportation of exported energy.

(b) Prosumer use the network any time according to the classification -

- i. net-metering prosumer: the availability and the use of the network is free of charge;
- ii. wheeling prosumer: the availability in compliance with the ERB tariff setting guidelines for embedded generation and the use (distribution or transportation) of the network is subject to the regulated and non-discriminatory value for distribution or transportation.

(3) Administration of prosumer

(a) Distribution or transmission network service operator administrate and dispatch net-metering generation to maintain the stability of the network.

- (b) Services supplied by the distribution or transmission network service operator are compensated by the regulated and non-discriminatory value for operations & administration.
- (4) Billing process
- (a) The billing process for prosumers will maintain the current billing period. An annual reconciliation process shall be added to the billing process.
 - (b) The billing distribution or transmission network service operator will consolidate the values for import and exports according to the metering process -
 - a. Pre-paid metering prosumers will automatically receive a credit at the value of the export on their pre-paid account in the meter, when the meter registers an export of energy. The monthly cost for the use of the grid as a prosumer and the cost administration for the net-metering are paid with a payment, when prosumer recharge the meter for the import.
 - b. Post-paid metering prosumers will receive for the billing period the invoice for the imports and their associated costs, the costs for the use of the grid as a prosumer and the cost for administration for the net-metering. The payable net value for these services will be offset by the net value of the exports.
 - (c) The netted billed value is subject of taxation.
 - (d) Within the first week of a calendar year prosumers have to report the metering of kWh for import, production and export of the previous calendar year (1.1.xx to 31.12.xx) to the distribution or transmission network service operator. Distribution or transmission network service operators reconcile the previous calendar year and settle the imbalances till the end of the first month with a separate billing process.
- (5) Details for tariffs, compensation and billing are determined in Schedule 1.

11. Monitoring, Control, Information and Reporting

- (1) Monitoring
- (a) Net-metering generation shall be periodically monitored by the prosumer to ensure sustainable generation.
 - (b) Net-metering generation of more than 30 kVA are required to install metering units allowing distribution or transmission network service operators to remotely monitor the energy flows.
- (2) Control
- (a) Prosumers with a net-metering generation of less than 30 kVA can opt alternatively to install remote-controlled Demand Response Enabling Device (DRED) or limit their exports onsite.
 - a. The prosumer may use a DRED to enable the distribution or transmission network service operator to dispatch the export of the net-metering generation unit at 100% or 0% of the generation capacity to secure the grid stability.

- b. The prosumer may limit permanently the export of the net-metering generation at 70%.
- (b) Prosumers with a net-metering generation of more than 30 kVA and up to 250 kVA are required to install a DRED. The DRED enables the distribution or transmission network service operator to control the export of the net-metering generation unit at 100% or 70% or 30% and 0% of the generation capacity to secure the grid stability.
 - (c) Prosumers with a net-metering generation of more than 250 kVA are required to receive individual dispatch instructions.
- (3) Information
- Prosumers with a net-metering generation of more than 250 kVA shall furnish to the distribution or transmission network service operator information on planned outages in order for the distribution or transmission network service operator to properly plan, and coordinate its control, maintenance and operation activities.
- (4) Reporting
- (a) Distribution or transmission network service operator shall report annually to the ERB on the progress on the implementation of net-metering generation in their distribution license areas.
 - (b) Distribution or transmission network service operators shall develop and maintain a register of prosumers in their distribution license areas. The register shall be updated at least once a year and submitted annually to the ERB.
 - (c) The register of net metered net-metering-customers must at least contain the following:
 - a. Prosumer names;
 - b. The total number of net-metering generation, by resource type;
 - c. The individual and total rated net-metering generation capacities of prosumer's facilities, by resource type;
 - d. The individual and total annual number of kWh received from prosumer, provided that this does not require additional certified metering equipment; and
 - e. The total estimated annual amount of kWh produced by prosumers; provided that this estimate does not require additional certified metering equipment.

12.Operatorship and Ownership of net-metering generation

- (1) Prosumer is the registered person for the consumption of energy, for the generation of electricity and the responsible person for the operation of the net-metering generation.
- (2) Prosumer need to have a right for the use of the net-metering generation.

- (3) Third party ownership of net-metering generation capacities with a cumulated capacity of above 250 kVA, are only allowed as prescribed by the ERB.

13. Clearing

- (1) The distribution or transmission network service operators are liable to financially compensate the prosumer for the value of the exports in the billing period as defined in the prosumer agreement.
- (2) In the event the distribution or transmission network service operator is not in the position to compensate the prosumer for the value of his exports (as the value of exports are higher than the value of imports), prosumer has immediately the right to offset the export value against any other actual or future invoices from the transmission network service operator.
- (3) In the event the distribution or transmission network service operator is not able to compensate the value for the export in cash or against other open invoices in due period, the prosumer is entitled after 30 calendar days to add interest for late payment to the due amount, as published by the National Bank.

Schedule 1

Determination of the regulated export tariff for net-metering generation

- (1) The regulated export tariff will be annually determined by the ERB and the annually actualized value will be published every year in the last month of the year and applied in the following year;
- (2) The regulated export tariff is determined according to the following process -
 - (a) the licensee(s) calculate(s) for each actual operating hydro power plant in the country the monthly marginal cash cost for a period of twelve months ending with the month of November of the precedent year in which the regulated export tariff applies and averages the cost for such twelve months period. The marginal cash costs are defined by the change of cash cost, when the hydro power plant increases or decreases the capacity load by 1MW, assuming, that the hydro power plants operated at a normalized capacity factor of 80%; in case the hydro power did not operated in average at the prescribed capacity factor the licensee simulates the capacity factor for the respective hydro power plant;
 - (b) the licensee ranks the marginal cash cost of analysed hydro power plant according to the Merit Order concept;
 - (c) the hydro power plant with the highest marginal cash cost of the analysed period of time determines the regulated export tariff for net-metering generation for the next year;
 - (d) the licensee(s) submit(s) the underlying technical and cost accounting data, the calculus and ranking according the principles of the Merit Order to the ERB for acceptance and approval.
- (3) The determined regulated export tariff will be assigned as a base tariff to the prosumer for a period of 120 calendar months;
- (4) The ERB will validate the regulated export tariff once a year during the regulated 120 months period with an analysis, if the marginal cash cost in the energy generation of selected hydro power plants according to Schedule 1 (2) (a) require adaptation due to the cost in- or deflation. The regulated export tariff will be indexed from the first year, when the inflation rate of the annual average marginal cash cost of the hydropower plants in/decrease by more than ten percent compared to the previous period. The regulated export tariff of the previous year will be then adjusted by ten percent.

Determination of the regulated charge for the meter

- (1) According to §8(2) a. the regulated charge in Kwacha for the replacement of the metering unit as prescribed by the ERB shall be paid by the prosumer.
- (2) The regulated charge is related to the actual cost of the distribution or transmission network service operator for the acquisition, customizing, delivery and installation of the metering unit.

- (3) The regulated charge for the exchange of the metering unit can be reviewed by the ERB, if and when it is deemed necessary.

Determination of the regulated tariff for distribution or transportation for wheeling prosumer

- (1) The ERB determines the tariff per kWh to compensate for the actual cost for distribution and transportation for the distance between the generation and consumption site and the associated technical losses for the distribution or transportation between both sites of the prosumer, acc. to the principles as laid out by the ERB transmission and distribution pricing methodology. The wheeling prosumer shall pay the wheeling charge only for the amount of kWh's, which was exported and imported in the same time interval.
- (2) The regulated tariff for the distribution or transportation can be reviewed, if and when it is deemed necessary.

Determination of the regulated tariff for operation & administration

- (1) According to §10(3)(b) the regulated tariff in Kwacha per (net) exported kWh for operation & administration is as prescribed by the ERB.
- (2) The regulated tariff is related to the marginal cost of the distribution or transmission network service operator for the operations and administration of the prosumer. Until further notice or proof of evidence by the distribution or transmission network service operator, the ERB assumes 10% marginal cost of the average administration cost, as published in the annual reports of the distribution or transmission network service operators.
- (3) The regulated tariff for operations & administration unit can be reviewed, if and when it is deemed necessary.