

Republic of the Philippines
ENERGY REGULATORY COMMISSION
 San Miguel Avenue, Pasig City



IN THE MATTER OF THE ADOPTION OF THE AMENDMENTS TO RESOLUTION NO. 10, SERIES OF 2012, ENTITLED "A RESOLUTION APPROVING THE FEED-IN TARIFF (FIT) RATES", PARTICULARLY FOR RUN-OF-RIVER HYDROPOWER (ROR HYDRO) AND BIOMASS FIT RATES, AS NECESSITATED BY THE REVIEW AND RE-ADJUSTMENT OF THE ROR HYDRO AND BIOMASS FIT RATES SINCE THE INSTALLATION TARGETS FOR ROR HYDRO AND BIOMASS TECHNOLOGIES HAVE BEEN EXTENDED BY THE DEPARTMENT OF ENERGY (DOE).

D O C K E T E D
 Date: NOV 23 2018
 By: [Signature]

ERC CASE NO. 2018-007 RM

X-----X

NOTICE OF PROPOSED RULE-MAKING

TO ALL INTERESTED PARTIES:

Notice is hereby given that the Commission has set the proposed *Amendments to Resolution No. 10, Series of 2010, entitled "A Resolution Approving the Feed-In Tariff (FIT) Rates", Particularly for Run-of-River Hydropower (ROR Hydro) and Biomass FIT Rates as Necessitated by the Review and Re-Adjustment of the ROR Hydro and Biomass FIT Rates Since the Installation Targets for ROR Hydro and Biomass Technologies Have Been Extended by the Department of Energy (DOE)* for public consultation on the following dates and venue:

Date	Time	Venue
11 January 2019 (Friday)	9:00 A.M.	ERC Hearing Room, 15/F Pacific Center Building, San Miguel Avenue, Ortigas Center, Pasig City

17 January 2019 (Thursday)	9:00 A.M.	ERC Visayas Area Operations Division (VAOD), St. Mary's Drive, Banilad, Cebu City
18 January 2019 (Friday)	9:00 A.M.	ERC Mindanao Area Operations Division (MAOD, Mintrade Bldg., Monteverde Ave. cor. Sales St. Davao City

All interested parties are required to submit their comments on the proposed Rule-Making on or before 7 January 2019 both in soft and hard copies, to the Commission's Docket Section. Electronic copies may be sent to *re-division@erc.gov.ph*. Parties who have filed their written comments on or before the above deadline will be given priority during the above-scheduled public consultation. All comments, written or oral, received by the Commission shall be made part of the record of the rule-making proceeding and shall be considered in the finalization of the amendments to the FIT Rules, particularly, the ROR Hydro FIT and Biomass FIT.

Antecedents

Pursuant to the Commission's Resolution No. 10, Series of 2012, entitled "*A Resolution Approving the Feed-In Tariff (FIT) Rates*", the Commission issued a Decision dated 27 July 2012 in ERC Case No. 2011-006 RM¹ approving the Run-of-River Hydropower (ROR Hydro) and Biomass FIT rates of PhP5.90/kWh and PhP6.63/kWh, respectively, based on the installation target issued by the Department of Energy (DOE) of 250 MW each for ROR Hydro and Biomass FIT.

In the said Decision, the Commission stated that the payment of the approved rates to the eligible RE Developers shall commence upon the effectivity of the FIT Allowance (FIT-All), which shall be determined by the Commission at a later date after due proceedings thereon.

Thus, on 10 October 2014, the Commission issued an Order in ERC Case No. 2014-109 RC, entitled "*In the Matter of the Application for Approval of the Feed-In Tariff Allowance for Calendar Years 2014 and 2015 Pursuant to the Guidelines for the Collection of the Feed-In Tariff Allowance and Disbursement of the Feed-In Tariff Allowance Fund, with Prayer for Provisional Authority*," provisionally approving the FIT-All rate of PhP0.0406/kWh which was made effective in the January 2015 billing of all on-grid electricity consumers. With the

¹ In the Matter of the Petition for Rule-Making for the Adoption of the Feed-In Tariff for Electricity Generated from Biomass, Ocean, Run-of-River Hydropower, Solar, and Wind Energy Resources

ERC CASE NO. 2018-007 RM
Notice of Proposed Rule-Making/23 November 2018
PAGE 3 OF 7

effectivity of the FIT-All rate, the implementation of the FIT system commenced on 1 January 2015.

On 29 September 2015, the Commission issued a Decision in ERC Case No. 2014-109 RC which made permanent the FIT-All rate of PhPo.0406/kWh.

Section 2.11 of ERC Resolution No. 16, Series of 2010, entitled “A Resolution Adopting Feed-In Tariff Rules” (FIT Rules), provides that FIT rates shall be subject to degression as may be approved by the Commission “to encourage the RE Developers to invest at the initial stage and hasten development of RE.” Thus, on 24 January 2017, the Commission issued Resolution No. 1, Series of 2017², approving the following degressed FIT rates for January 2017 to December 2017 for RE Plants with Commercial Operations Date (COD) within the said period:

Technology	Based on ERC Case No. 2011-006 RM Decision		Degressed FIT Rates (in PhP/kWh)
	ERC-Approved FIT Rates	ERC-Approved Degression Rates	
Run-of-River Hydro	5.9000	0.5% after year 2 from effectivity of FIT	5.8705
Biomass	6.6300	0.5% after year 2 from effectivity of FIT	6.5969

Further, Section 7 of the FIT Rules provides that the National Renewable Energy Board (NREB) shall (a) monitor and review regularly the development of RE generation and (b) report to the Commission the impact of FIT within three (3) years and every two (2) years thereafter from the effectivity of the said Rules.

Section 7 of the FIT Rules also provides that a review and re-adjustment of the FIT may be done by the Commission in the following cases:

- a. When the installation target per technology as defined by NREB is achieved;
- b. When the installation target per technology is not achieved within the period targeted;

² A Resolution Setting the Degressed Feed-In Tariff Rates for Run-of-River Hydro and Biomass, as Approved in Section 2.11 of the Feed-In Tariff Rules (FIT Rules)

- c. When there are significant changes to the costs or when more accurate cost data become available that will allow NREB to calculate the FITs based on such methodology that shall later be adopted by the ERC; and
- d. Other analogous circumstances that justify review and readjustment of the FITs.

Based on the foregoing, the initial FIT rates which became effective on 1 January 2015 shall only be applicable up to 31 December 2017 (with degressed rates for CY 2017). Therefore, the initial FIT rates approved in ERC Resolution No. 10, Series of 2012 were made effective for the period January 2015 to December 2017.

In its letter dated 27 November 2017, the NREB sought the approval of the DOE to extend the period of FIT eligibility for Biomass and ROR hydro power for a period of three (3) years from 31 December 2017 to December 2020 based on RE Developers' requests for extension.

In a letter dated 23 February 2018, the DOE informed the Commission of its resolution extending the FIT for Biomass and ROR Hydro for another two (2) years, or until 31 December 2019, or *"upon successful Commissioning of the Run-of-River Hydro and Biomass Power projects covering the remaining balance of their respective installation targets, whichever comes first."*

Based on the letter from DOE, the total capacities of both Biomass and ROR Hydro plants built and commissioned or to be commissioned within the year have neither exceeded nor reached the said installation targets of 250 MW each, the details of which are as follows:

FIT Status as at 31 December 2017				
Type of RE Resource	Installation Target (MW)	Capacity with COC-FIT (MW)	Capacity with COE-FIT (MW)	Balance for Issuance of COE-FIT (MW)
Run-of-River Hydro	250	26.6 (4 projects)	8.00 (1 project)	215.40
Biomass	250	103.56 (11 projects)	35.05 (8 projects)	111.39

The DOE also recommended that the FIT rate to be granted should be the FIT rate at the time of the successful commissioning of the projects as defined under Department Circular 2013-05-009 (The *Guidelines for the Selection Process of Renewable Energy Projects*

under Feed-in Tariff System and the Award of Certificate for Feed-in Tariff Eligibility), and as approved by the Commission.

Consequently, the Commission initiated a review of the FIT for ROR Hydro and Biomass pursuant to Section 7 (b) of the FIT Rules which provides that a review and re-adjustment of the FITs shall be done “*when the installation target per technology is not achieved within the period targeted.*”

On 26 March 2018, the Commission issued a letter directing NREB to submit its proposal or recommendation on the review of existing FITs for ROR Hydro and Biomass within thirty (30) days from receipt thereof.

On 20 June 2018, the Commission received a letter from NREB dated 14 June 2018 requesting for additional period of thirty (30) working days within which to submit the FIT Proposals for Biomass and Run-of-River Hydro Power projects. In response thereto, the Commission, in a letter dated 12 July 2018, allowed NREB to submit its compliance on or before 01 August 2018.

In a letter dated 31 July 2018, NREB requested for another thirty (30) working days period within which to submit its compliance. However, in a letter dated 1 August 2018, the Commission only allowed a period of fifteen (15) days from receipt thereof, considering the urgency in setting the FIT rates.

Finally, on 22 August 2018, NREB endorsed *in toto* the submissions of Philhydro Associations, Inc. (Philhydro) and Biomass Renewable Energy Alliance (BREA) on the FIT for Biomass and ROR Hydro Power projects. The pertinent portions of the said submissions are hereunder quoted as follows:

“In summary, the proposed FIT rates for ROR is the ERC-approved FIT rate, degressed to Php5.8705/kWh with adjustments for local inflation and foreign exchange (FOREX) rate variations. While for Biomass, BREA is not asking for any increase over the degressed biomass FIT rate of Php6.5969/kWh.”

In the said submission, Philhydro made assumptions on the calculation of FIT rate under different scenarios, starting with the July 2012 approval of the ROR Hydro rate of Php5.90/kWh, with approved degression rate of 0.5% after year two (2) from the effectivity of FIT.

ERC CASE NO. 2018-007 RM
Notice of Proposed Rule-Making/23 November 2018
PAGE 6 OF 7

Summarized below are the different assumptions considered and the resulting rates:

	July 2012 ERC-Approved Hydro FIT Rate of Php5.90/kWh , with approved degression rate of 0.5% after Year 2 from effectivity of FIT, resulting to 16.5% Nominal Equity IRR.	With changes in interest rates and forward fixed foreign exchange rate (2018), Nominal Equity IRR decreased to 12%	Updated Engineering Procurement, & Construction (EPC will necessitate a higher FIT rate of Php6.54/kWh to maintain 12% Nominal Equity IRR	At degressed FIT Rate of Php5.8705/kWh, without CPI and Forex adjustment, nominal equity will fall to 9%
Construction Period	24 months from financial closing			
Operating Period	25 years from Commercial Operations Date			
Equipment Cost	USD2,189,000/MW	USD2,480,000/MW	USD189,000/MW	
Local (All-in) Interest Rate excluding tax	10%	8.75%		
Foreign (All-in) Interest Rate excluding tax	8%	7%		
Forward Fixed Exchange Rate	Php44.00/USD	Php53.50/USD		
With Degression	0.5%			
With CPI and Forex Adjustments	Y			N
Resulting Cost of Equity (Onshore Equity IRR)	16.5%	12%	12%	9%

NREB endorsed Philhydro's request to continue the ERC-approved FIT rate, degressed to **Php5.8705/kWh**, with adjustments for local inflation and foreign exchange (FOREX) rate variations.

Meanwhile, for the FIT proposal for Biomass, BREA presented the original biomass financial model adopted by the Commission, showing the FIT rate of Php6.63/kWh and the corresponding Equity Internal rate of Return (IRR) and pre-tax Weighted Average Cost of Capital (WACC). The said FIT rate was degressed by 0.5% after year two (2) from its implementation to Php6.5969/kWh following the Commission's original Decision on FIT rates.

For the cost of equipment, there were no substantial decreases for biomass technology. The cost of feedstock, which is a need for biomass plants, has also not decreased, and is affected by higher transport costs due to fuel price increases.


BREA also presented a matrix on the effect of fuel costs and foreign exchange on the Equity IRR and WACC showing declining returns, to wit:

Ave. Fuel Cost (P/MT)	1,297	1,300	1,600	1,800
Onshore Equity IRR				
FOREX				
43	17.1%	-	-	-
53	14.0	13.9%	8.7%	4.9%
WACC pre-tax				
FOREX				
43	11.6%	-	-	-
53	11.6%	10.6%	8.8%	7.6%

Despite the declining returns, BREA prayed to continue the degressed Biomass FIT rate of **Php6.5969/kWh**.

WITNESS, the Honorable Chairperson and CEO **AGNES VST DEVANADERA**, and the Honorable Commissioners **ALEXIS M. LUMBATAN** and **CATHERINE P. MACEDA**, Energy Regulatory Commission, this 23rd day of November, 2018 at Pasig City.


JOSEFINA PATRICIA A. MAGPALE-ASIRIT
Commissioner

RE: /J/C/SOM/GLO/BiomassHydro FIT noph