

# THE PHILIPPINES: THE REGULATOR ADOPTS THE COUNTRY'S FIRST FEED-IN TARIFF RULES



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In July 2008, the Philippines enacted an ambitious new renewable energy law<sup>i</sup> and in 2010 the country's regulator, the Energy Regulatory Commission (ERC), adopted the country's first Feed-In Tariff Rules. The new law on renewable energy identified clear tasks for the Energy Regulatory Commission, including the promulgation of Tariff Rules. This country profile looks in depth at the 2010 Feed-in Tariff Rules to offer guidance as to how committed, strong regulatory contribution can result in a comprehensive renewable energy legislative framework, with incentivized tariffs that drive forward RE investment.

The Republic of the Philippines, an archipelago of over 7,000 islands in the Pacific Ocean with a population of 94 million, imports approximately 45% of its energy needs.<sup>ii</sup> Installed capacity as of December 2008 totaled 15,681 MW. Fossil fueled power plants, primarily located in the Luzon island grid, are the dominant generation source. Renewable energy sources such as hydro, geothermal, wind and solar contributed 21.0%, 18.0% (the second largest share in the world), 12.5% and 0.2% shares, respectively. Over the last few years, the Philippines has made increasing domestic renewable energy a priority. An 8 MW wind plant, the Northwind Power Phase II located in Bangui, Ilocos Norte, became operational in September 2008, and the 2.5 MW Sevilla Mini-Hydro located in Bohol was commissioned in November 2008.

The Philippine electric power sector can be divided into two categories: the main grids on the islands of Luzon, Visayas and Mindanao, and other localized grids on the other islands. In the main grids, supply comes from the government-owned National Power Corporation (NPC) and various independent power producers (IPPs). The remaining areas are served by numerous small power plants with a combined installed capacity of approximately 250 MW. Transmission in the main grids is performed by National Grid Corporation, the investor-owned utility that holds the concession, to provide this service, while the NPC serves the other areas through its Missionary Electrification Program. There are well over a hundred distribution companies, some investor-owned.<sup>iii</sup>

The Electric Power Industry Reform Act of 2001<sup>iv</sup> was designed to modernize the sector and create a competitive market. The 2001 Act created the ERC and provided for the disaggregation and eventual privatization of the NPC, with the transmission component spun off under the law to the National Transmission Company (Transco).<sup>v</sup> The law also created a Wholesale Electricity Spot Market (WESM), to be overseen by the Philippine Electricity Market Corporation (PEMC) for the transition period, after which the PEMC functions would be transferred to an independent market operator (yet to become operational).<sup>vi</sup> After the Implementing Rules and Regulations were approved in February 2002, the ERC unbundled the tariffs of NPC and the distribution utilities and promulgated the grid and distribution codes in December 2001. Rules governing WESM were issued in June 2002 and the market began

commercial operation in 2006, setting the stage for increased investment and competition from all forms of energy sources.

Retail prices remain high for various reasons, including drought, high-cost IPPs and reliance on imported oil. The highly concentrated WESM market may also be a factor.<sup>vii</sup> One benefit is that implemented feed-in tariffs (FITs) do not have to compete with subsidized tariffs and existing tariff levels are not so low as to make FITs unviable.<sup>viii</sup>

## The RE Regulatory Framework

Governmental bodies involved in oversight of the regulatory sector – with impact on the renewable energy framework – include:

- The Department of Energy (DOE) – created in 1992 under Republic Act No. 7638, responsible for preparing, coordinating and supervising all activities of the Government relating to energy exploration, development, use and conservation
- The ERC, created in 2001, to regulate sector participants
- The National Electrification Agency, primarily responsible for rural electrification<sup>ix</sup>
- The National Renewable Energy Board (NREB), created by the 2008 Renewables Law consisting of a 15-person advisory board of government and private sector representatives
- The Board of Investments, under the Department of Trade and Industry, with the power to offer tax breaks and incentives to encourage investment in the sector

In 2008, the Philippines enacted a comprehensive and ambitious renewable law, Republic Act No. 9513, also known as the Renewable Energy Act of 2008 (hereafter, the RE Act).<sup>x</sup> The RE Act includes mandatory purchasing of power from renewables, a renewable energy certificate market as a subset of WESM, preferential feed-in tariffs, a “green energy option” that allows consumers to choose renewable sources and various other incentives. With respect to the different market actors responsible for renewable energy development, the RE Act provides that:

- The DOE promulgates rules regarding the mandatory purchase of renewable energy, awards RE service contracts, formulates the National RE Plan, and registers RE participants.<sup>xi</sup>
- The ERC sets rates, including feed-in tariffs for wind, solar, ocean, run-of-the river hydropower and biomass resources, as well as the pricing methodology for net metering.

- The NREB sets the minimum percentage of renewable power for the renewable portfolio standards; assists the ERC in crafting and setting the FIT system regulations as well as in the setting the tariffs; and consults with the DOE on how to establish the green energy option and on the use of a Renewable Energy Trust Fund. The NGCP is responsible for the settlement and payment of the FITs for the Eligible RE Plants, and for this purpose, consolidates the information on physical sales of all Eligible RE Plants and the RE generation for the whole country, including off-grids, and shares this information with relevant stakeholders.

## The Feed-In Tariff Rules

The FIT Rules came into effect after a lengthy public consultation and comment process. The regulator posted its draft Rules for comment on its website in March 2010 and offered an open comment process. The ERC approved the Rules in July.<sup>xii</sup>

The FIT Rules provide for:

- Guidelines as to how to establish FITs through a renewable energy charge to be collected from all consumers through the Feed-In Tariffs Allowance, or “FIT-All,” a uniform charge to be imposed on all electricity consumers based on their kWh consumption. The proceeds of the FIT-All go to a fund which National Grid Corporation of the Philippines (NGCP) will manage. This fund will provide payments to the renewable energy developers based on the FITs applicable to them and their actual energy deliveries into the system. The ERC is responsible for setting the FIT-All upon petition by NGCP.
- A 15-year duration. Renewable energy developers are entitled to receive the FITs corresponding to the year it starts commercial operation for a period of 15 years. The ERC is reviewing requests from potential investors to extend this duration to 20 years.
- Annual Adjustments for cost of local inflation and foreign exchange rates. The ERC reviews and adjusts the FITs annually for the entire period of its applicability to allow pass-through of local inflation and foreign exchange rate variations, employing “a simple benchmarking indexation formula to apply to all technologies based on the applicable percentage sharing between local and foreign capital . . .” The ERC will publish these adjusted FITs annually and use them in the calculation of the FIT-All for the current year.
- Technology-specific tariffs. Further differentiation based on peak or off-peak generation, or on plant size may be instituted by the ERC, subject to additional analysis by the ERC. Such differentiation would be linked to installation targets, which the NREB shall set for each technology.
- Degression rates. The ERC may subject FITs to a degression rate to account for the maturing of renewable energy technology over time. With respect to

depression, the FIT rules provide: “To encourage the RE producers to invest at the initial stage and hasten deployment of RE, the FITs to be established by ERC shall be subject to a depression rate which it shall determine based on NREB’s recommendation. The Eligible RE Plants shall be entitled to such depressed FITs corresponding to the year when they started commercial operation. The ERC may approve a different depression rate for different technologies.”

- FITs for self-generation. FITs shall be established for each generation plant exporting net excess electricity to the distribution or transmission network.
- Reasonable Flexibility. While fixed, the ERC may review and re-adjust the FITs if/when: (1) the installation target per technology as defined by NREB is achieved; (2) the installation target per technology is not achieved within the period targeted; (3) there are significant changes to the costs or more accurate cost data become available that will allow NREB to calculate the FITs based on the methodology included in the annex; or (4) “other analogous circumstances that justify review and re-adjustment of the FITs.” However, the new FITs approved by the ERC may apply only to new RE projects. Eligible RE plants in commercial operation at the time of approval of the new FITs remain entitled to their existing FITs (although section 9.1 of the FIT Rules contains a general good cause exemption permitting changes to existing FITs when to do so “is found to be in the public interest and is not contrary to law or any other related rules and regulations”).

Furthermore, the Rules state that the cost of the FIT will be passed on to transmission and distribution customers as a uniform kWh rate to be listed separately on customer bills. NGCP is responsible for collecting FIT-All proceeds to ensure payment to RE producers. A portion of the proceeds will be dedicated to a Working Capital Allowance for this purpose. In cases of delay of payment or non-payment, ERC has the authority to impose penalties, including a surcharge of up to 20% as well as monthly accumulated interest. NGCP may disconnect any customer defaulting on payment for a period of over two billing periods.

The FIT may be reviewed on an annual basis based on petition from NGCP but the Rules allow for revision of the tariff should funds in the Working Capital Allowance fall under 50% of the projected FIT-All proceeds. According to the Rules, the FIT will be set based on “forecasted<sup>xiii</sup> annual required revenue of the Eligible RE Plants; the previous year’s over or under recoveries; NGCP’s administration costs; the forecasted annual electricity sales; and such other relevant factors to ensure that no stakeholder is allocated with additional risks in the implementation of the FITs.”

The FITs that NREB calculates and submits to the ERC for approval must conform to the Rules, except that the initial tariff may be based on “a reference cost study for each technology based on a real candidate project or a hypothetical one depending on the available information. The project to be chosen shall be representative of the average conditions of the renewable energy plant operating in compliance or at par with applicable international technical standards and practices for such technologies, and the pricing study shall consider also all non-price incentives in R.A. No. 9513.” The FIT Rules provide that “the NREB shall propose the FITs taking into

account the expected MW capacity for each technology that it shall set as installation targets and the number of years when this target shall be achieved. The FITs shall cover the costs of the plant, including the costs of other services that the plant may provide, as well as the costs of connecting the plant to the transmission or distribution network, calculated over the expected lives of the plant, and provide for market-based weighted average cost of capital (WAC e) in determining return on invested capital.”

In summary, ERC has established a strong foundation for the FIT-All by creating a clear regulatory framework supporting the mechanism and providing a detailed blueprint of the analysis to maximize benefits and minimize cost. These guidelines allow flexibility in the implementation of the FIT while at the same time setting up a predictable regulatory environment that encourages investment in renewables.

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<sup>i</sup> [http://www.doe.gov.ph/popup/republic\\_act.asp](http://www.doe.gov.ph/popup/republic_act.asp)

<sup>ii</sup> For information on the RE policy of the Philippines, see [http://www.doe.gov.ph/EnergyAccReport/2009%201-Page%20Ad\\_CABfinal.pdf](http://www.doe.gov.ph/EnergyAccReport/2009%201-Page%20Ad_CABfinal.pdf)

<sup>iii</sup> By far the largest distribution company is MERALCO, which serves the capital, Manila, and the surrounding area. About 25% of the population lives within this service territory. Luzon constitutes the largest island grid, with 11,907 MW of the total installed capacity and a peak demand of 6,674 MW. The Luzon and Visayas grids share power via submarine cable interconnections, while the third largest population center, Mindanao, remains a separate grid.

<sup>iv</sup> <http://www.doe.gov.ph/Laws%20and%20Issuances/RA%209136.pdf>

<sup>v</sup> <http://www.transco.ph/>; the Transco became a subsidiary of the Power Sector Asset and Liabilities Management Corporation (PSALM), which also acquired the NPC's IPP contracts (see <http://www.psal.gov.ph/index.asp>).

<sup>vi</sup> <http://www.doe.gov.ph/Downloads/Revised.pdf>

<sup>vii</sup> When WESM started its commercial operations, PSALM and NPC controlled about 55% and 22%, respectively, of the generation capacity registered. To mitigate this dominance and enhance competition, the PSALM IPPs are grouped under a different IPP Administrator, an independent entity appointed by PSALM. When WESM began operations, these IPP Administrators were not yet in place, however, which made PSALM an interim IPP Administrator controlling more than 30% of the installed capacity in the Luzon Grid. Eventually PSALM initially split its IPPs into four trading teams and NPC created a trading team for each plant, with nine trading teams at the start of WESM. As of July 2008, PSALM had merged its trading teams into three and NPC eliminated four teams via privatization.

<sup>viii</sup> As long as the IPP Administrators remain controlled by the same entities, an inherent conflict exists between the multiple use of Administrators to lower prices through competition and the objective of management to increasing revenues. Given tight supply, moreover, many plants become crucial suppliers during peak demand, creating opportunities for the exercise of market power. PSALM's dominance of the spot wholesale market became even more pronounced when more generators shifted to bilateral contracts, leaving the PSALM-IPPs with an even greater share of the diminished uncommitted capacity that competes in the spot market.

To alleviate this situation, the next step in reform is to make the IPP Administrators independent. The first RFP for IPP Administrators was held in June 2009 and failed because the bids fell short of the reserve price; a second round of bidding in August 2009 resulted in the appointment of independent IPP administrators to manage the contracted capacities of two coal-fired plants accounting for roughly a third of the IPP contracts for Luzon and Visayas. <http://www.econ.upd.edu.ph/dp/index.php/dp/article/view/644/Full%20Paper>

<sup>ix</sup> Information about the National Electrification Administration can be found at: <http://www.nea.gov.ph/>

<sup>x</sup> [http://www.doe.gov.ph/popup/republic\\_act.asp](http://www.doe.gov.ph/popup/republic_act.asp)

<sup>xi</sup> The DOE's Implementing Rules and Regulations for the Law were signed on 25 May 2009. To expedite processing of renewable energy projects, other enabling guidelines were issued by the DOE such as the Department Circulars covering the accreditation of manufacturers, fabricators and suppliers of locally-produced Renewable Energy equipment and components, as well as guidelines governing the award of RE service and operating contracts and registration of RE developers. 87 RE service and operating contracts were executed on 23 October 2009, adding about 555 MW of hydropower, 18.4 biomass and 623 MW of wind. [http://www.doe.gov.ph/EnergyAccReport/2009%201-Page%20Ad\\_CABfinal.pdf](http://www.doe.gov.ph/EnergyAccReport/2009%201-Page%20Ad_CABfinal.pdf)

<sup>xii</sup> [http://www.erc.gov.ph/pdf/Revised%20FIT%20Rules%20for%20POSTING\\_final.pdf](http://www.erc.gov.ph/pdf/Revised%20FIT%20Rules%20for%20POSTING_final.pdf)

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<sup>xiii</sup>“The forecasted annual required revenue of the Eligible RE Plants shall be determined considering the following: for deliveries to the transmission network, the forecasted annual generation of the Eligible RE Plants and the applicable FITs for the year. For deliveries to distribution network, the forecasted annual generation of these embedded Eligible RE Plants, the applicable FITs for the year, and the annual average generation charge of all the distribution utilities where the Eligible RE Plants are embedded, consistent with Section 2.8, shall be considered. The projected WESM generation revenues shall also be considered, if applicable, based on subsequent issuances of the ERC as mentioned in Section 2.9.” (See [http://www.erc.gov.ph/pdf/Revised%20FIT%20Rules%20for%20POSTING\\_final.pdf](http://www.erc.gov.ph/pdf/Revised%20FIT%20Rules%20for%20POSTING_final.pdf))