
Office of Utilities Regulation

**Jamaica Public Service Company Limited
Standard Offer Contract for the Purchase of
As-Available Intermittent Energy from
Renewable Energy Facilities up to 100kW**

Revised Determination Notice



OFFICE OF UTILITIES REGULATION

May 01, 2012

DOCUMENT TITLE AND APPROVAL PAGE

1. DOCUMENT NUMBER: ELE2011006_DET004_REV001

2. DOCUMENT TITLE: Jamaica Public Service Company Limited Standard Offer Contract for the Purchase of As-Available Intermittent Energy from Renewable Energy Facilities up to 100kW Revised Determination Notice

3. PURPOSE OF DOCUMENT

This document sets out the Office's decisions regarding the provisions of a Standard Offer Contract which seeks to provide the opportunity to Jamaica Public Service Company Limited's customers who generate electricity for their own use from renewable sources, to sell their excess energy to the national grid under a net billing arrangement.

This revised document incorporates the determination on:

- I. Direct Programme Cost (DPC)
- II. Application Process

4. RECORD OF DOCUMENTS ON ISSUE

Document Number	Description	Date
ELE2011006_DET004	Determination Notice – JPS Standard Offer Contract	September 30, 2011
ELE2011006_DET004_REV001	Revised Determination Notice – JPS Standard Offer Contract	May 01, 2012

5. APPROVAL

This document is approved by the Office of Utilities Regulation and the decisions therein become effective on **May 01, 2012**.

On behalf of the Office:



Maurice Charvis
Deputy Director General
Date : May 01, 2012

Abstract

The Amended and Restated All-Island Electric Licence 2011 (the “Licence”) establishes the framework for the planning and implementation of incremental additions of generation capacity to the national electric grid. The Licence gives the Jamaica Public Service Company Limited (“JPS”) the exclusive right to transmit, distribute and supply electricity Island-wide. JPS may, under the Licence, both generate and purchase the electricity it distributes through the national grid. Where new generation is purchased the Licence requires such procurement to generally be done via competitive tender, except that the Office of Utilities Regulation (the “Office”) may approve a simpler process in certain situations, such as for capacity additions up to 25 MW which are generated from renewable sources..

In June 2006 the Office published its Regulatory Policy for the Addition of New Generating Capacity to the Public Electricity Supply System (“Guidelines for the Addition of Generating Capacity to the Public Electric Supply System”) Document Number Ele 2005/08.1 (the “Policy”). Under the Policy the Office outlined the modalities by which capacity and energy generation can be added to the public electricity supply system.

The Policy provides, among other things, for the procurement of small additions of energy (i.e. 100kW or less) from renewable energy plants by way of a Standard Offer Contract issued by JPS. This revised Determination Notice sets out the terms of the Standard Offer Contract as approved by the Office and the process by which the purchase of energy under this arrangement will be implemented. In particular, the revised document incorporates the determination on:

- Direct Programme Cost (DPC); and
- The Application Process

Glossary

- JPS - Jamaica Public Service Company Limited
- Licence - The Amended and Restated All-Island Electric Licence 2011 or any restatement thereof or amendment thereto.
- Office & OUR - The Office of Utilities Regulation as established pursuant to section 3 of the Office of Utilities Regulation Act
- OUR Act - The Office of Utilities Regulation Act and any amendments thereto.
- Policy - Regulatory Policy for the Addition of New Generating Capacity to the Public Electricity Supply System (“Guidelines for the Addition of Generating Capacity to the Public Electric Supply System”) Document Number Ele 2005/08.1
- SOC - Standard Offer Contract

Table of Contents

DOCUMENT TITLE AND APPROVAL PAGE.....	Error! Bookmark not defined.
Abstract	iii
Glossary	iv
1.0 Background	1
1.1 Legislative and Regulatory Framework	1
1.2 Net Billing Policy	2
1.3 Renewable Premium.....	2
1.4 Licensing.....	3
1.5 Consultation Process	3
2.0 Determinations and General Comments.....	5
2.1 The Standard Offer Contract.....	5
2.2 Eligible JPS Customers.....	5
2.3 Application Process	5
2.4 Licence to Supply Electricity	6
2.5 Metering under the SOC Arrangement.....	6
2.6 Short Run Avoided Cost of Generation	7
2.7 Pilot Programme	8
2.8 Key Provisions of the SOC	8
ANNEX A: OUR Responses to Consultation Comments/Queries.....	12
ANNEX B: Standard Offer Contract.....	36
ANNEX C: Licence Application Form.....	75
ANNEX D: Application Process	79
ANNEX E: Form of Licence	84

1.0 Background

1.1 Legislative and Regulatory Framework

The *Amended and Restated All Island Electric Licence 2011* (the “Licence”) provides a framework for the planning process required to identify the long term needs for the addition of generation capacity. In this respect the Licence establishes the basis for securing for Jamaica the timely addition of capacity to meet the demand for electricity at the least cost. Condition 18 of the Licence in particular provides for the procurement of new generation capacity by way of a competitive tendering procedure, but allows the Office to approve a simpler procurement methodology, after consultation with JPS, for capacity additions up to 25 MW which are generated from renewable sources..

The Office, pursuant to its statutory function to regulate the generation, transmission, distribution and supply of electricity, has outlined the regulatory framework and rules for the addition of electricity capacity to the national grid. This framework and the rules are set out in its document entitled “Regulatory Policy for the Addition of New Generating Capacity to the Public Electricity Supply System” Document Number Ele 2005/08.1 (the “Policy”). The Policy takes into account the requirements of the Licence, the government’s energy policy, industrial policy and other relevant policies and issues that impact the electricity sector.

The Policy sets out, among other things, the “simpler procurement methodology” as approved by the Office for capacity additions of up to 100kW supplied from plants which use renewable resources as its primary energy source. Renewable energy sources refers to resources such as sunshine, wind, rivers and biological cycles which are naturally regenerated and are not depleted when exploited. The said approved procurement methodology allows these small additions of capacity to be supplied to the national grid by way of a Standard Offer Contract (“SOC”) issued by the JPS. The terms and conditions of the contract would address, inter alia, the following:

- Price
- Rights and responsibilities of parties to the contract
- Safety
- Technical requirements of the facility
- The assignment of interconnection costs

Payments for electricity supplied under the Standard Offer Contract would be arranged in accordance with the OUR approved Net Billing Policy.

1.2 Net Billing Policy

The net billing policy stipulates that provision be made for small commercial and residential electricity generation installations with capacity up to 100kW from renewable energy sources. The net billing provisions in the policy further reiterate that by the nature of these renewable installations, supplemental power will be needed from the national grid from time to time, and on occasion they will have excess energy available for sale to the national grid. These installations will be allowed to exchange power with the national grid under a net billing arrangement which involves the following:

- The installation of up to two (2) meters at the premises where the renewable energy facility is located. In the case of two meters, each meter will measure energy flow in opposite directions. One meter will account for flows from JPS to the customer premises and the other from the generation facility at the customer premises to JPS. In the case of the installation of a single meter, that meter will have the capability to measure energy flows in both directions.
- JPS will be responsible for the installation and maintenance of the meters. Meter costs will be recovered through the rates charged to the customer for electricity from JPS.
- A standard contract to be executed by JPS and the customer, which will specify the rate fixed by the Office at which the customer will sell energy to, and purchase energy from the national grid. These rates will be verified by the Office and published in the newspapers from time to time.

1.3 Renewable Premium

In order to encourage the development of renewable energy technology, the Government of Jamaica has determined that renewable plants will be allowed to sell electricity to JPS at a maximum of 15% above the avoided cost of energy. In this regard the Policy therefore provides that the pricing mechanism for the supply of energy to the national grid under the SOC arrangement will incorporate this renewable premium.

1.4 Licensing

The Electric Lighting Act empowers the Minister to issue licences to persons wishing to supply electricity for any public or private purpose. Persons wishing to sell electricity to JPS must therefore first obtain a licence from the Minister before their facility can be connected to the national grid.

Section 4(1)(b) of the OUR Act requires that the OUR processes all applications for licences to provide a regulated service and that the licences be granted by the responsible Minister upon the recommendation of the Office. The Office will therefore process all applications for a licence to sell electricity to the national grid under the SOC arrangement, and submit its recommendation for grant of licence to the Minister with portfolio responsibility for energy.

1.5 Consultation Process

The process of finalizing the SOC for promulgation and implementation commenced in May 2009 when the Office initiated the consultation process with JPS. The Office deemed it necessary to first have an extensive consultation with JPS to ensure that the initial draft of the SOC adequately reflected components of the regulatory framework and legislation governing the sector and took into account relevant commercial and technical matters.

After several meetings, exchange of correspondence and deliberations, a draft SOC entitled “Jamaica Public Service Company Limited Standard Offer Contract for the Purchase of As-Available Energy from Intermittent Renewable Energy Facilities up to 100kW” was prepared for submission to the general public for comments.

The draft SOC was issued to the public on March 16, 2011 for consultation and comments. Three consultation meetings were held in, Montego Bay, St. James on March 23, 2011, Mandeville, Manchester on March 28, 2011 and in Kingston on March 30, 2011. The deadline for receipt of written comments on the draft SOC was April 15, 2011.

The Office staff reviewed all written comments/questions as well as the comments and queries that were recorded from the three consultation meetings. The Office’s responses to the said comments and queries are set out in **Annex A** of this Determination.

A revised SOC document which takes into account the comments and concerns raised by stakeholders in the consultation process has now been finalised and is attached in **Annex B** to this Determination. The main issues raised by stakeholders and the Office's final determination with respect to these issues are set out in section 2.0 - General Comments and Determinations - of this document.

2.0 Determinations and General Comments

2.1 The Standard Offer Contract

The Standard Offer Contract (“SOC”) is a standardized contract, the terms of which are approved by the Office as set out in Annex B to this Determination, under which JPS customers who generate electricity for their own use from renewable resources may sell their excess energy (i.e. electricity supply beyond that which is needed to meet the customer’s own needs) to JPS. The compensation for the energy exchanged between JPS and the customer under the SOC is to be determined via a net billing arrangement whereby the customer will pay the prevailing retail price for energy consumed from the national grid as is applicable to the customer’s rate and class and JPS will purchase the customer’s excess electricity at the “short run avoided cost of generation”..

2.2 Eligible JPS Customers

Participation in the SOC arrangement is open to residential and commercial customers of JPS who generate their own electricity using a facility which:

- has a capacity of less than or equal to 100kW in the case of commercial customers or less than or equal to 10kW in the case of residential customers;
- uses renewable technologies as its primary source of power; and
- complies with all relevant technical specifications and standards as are set out in the SOC as may be amended from time to time.

2.3 Application Process

Eligible JPS customers may participate in the SOC arrangement by making an application with supporting documentation to JPS to interconnect to the national grid. Additionally, the customer is required to make an application to the Office for a licence to supply electricity. The application form for grant of licence is set out in **Annex C** to this Determination and can be accessed at the OUR office or on its website – www.our.org.jm. And also JPS’ customer service outlets islandwide. The application process is set out in **Annex D** to this Determination.

It is determined that a non-refundable processing fee of \$2,000.00 for residential applicants and \$10,000.00 for commercial applicants will be payable to the Office on submission of the application for a licence.

2.4 Licence to Supply Electricity

If the application satisfies all the requirements the Office will make recommendations to the Minister with responsibility for energy that a five (5) year licence be issued applicants seeking to supply excess energy to the national grid under the SOC arrangement. This licence will be issued pursuant to section 3 of the Electric Lighting Act. The form of licence as recommended by the Office is set out in **Annex E** to this Determination.

2.5 Metering under the SOC Arrangement

The excess energy supplied from the customer's generation plant will be metered using a revenue class demand meter or an advance smart meter (i.e. a meter capable of registering energy flow in both directions) that must be installed at the customer's expense.

In the event that JPS will replace the customer's existing meter with an advance smart meter, then the customer will only be required to pay the difference in cost between the cost of the advance smart meter and the value of the meter being replaced. The value of the meter being replaced will depend on the type and age of the meter. The OUR will determine the differential in cost payable by the customer on a case by case basis so as to ensure fairness and consistency with the current tariff structure. On approval of the customer's application, JPS will have to propose a cost payable by the customer with supporting documentation and any other information that the OUR may request, and thereafter the OUR will make a determination as to the differential to be paid by the particular customer based on a principle of fair allocation of cost.

The Office has determined that given that the installation of a production meter on the customer's generation plant for the purpose of monitoring the generating system profile and auditing (which would be an additional meter) would mainly be of benefit to the customer, the installation of this second meter will be optional for the customer rather than mandatory.

2.6 Short Run Avoided Cost of Generation

The Office has determined that the rate payable by JPS to the customer for energy supplied to the national grid from the customer's renewable energy facility shall be at the short run variable avoided cost of generation. The short run avoided cost of generation, though much lower than the retail price charged by JPS for electricity supply, reflects the fuel cost per unit of net generation on a monthly basis. This price is effectively the system total monthly fuel costs divided by the Net Generation and shall be verified and published by the Office from time to time. Net generation is the amount of electricity generated by the power plants on the electric grid (i.e. by both JPS and independent power producers) that is transmitted and distributed for consumer use. Net generation is less than the total gross power generation as some power produced is consumed within the plant itself to power auxiliary equipment such as motors and pollution control devices.

$$\text{Net Generation} = \text{Gross Generation} - \text{Usage within the plant}$$

Fuel Cost per unit of Generation

The cost of fuel per kilo-watt hour shall be calculated each month on the basis of the total fuel used by the system, computed to have been consumed by JPS and the Independent Power Producers (IPP) in the production of electricity.

The short term avoided cost of generation will be calculated in the following manner:

$$\text{SAC}_m = F_m / \text{Gen}_m$$

Where:

Billing Period = The billing month during the effective period for which the short term avoided cost rate will be in effect as determined by the Office.

SAC_m = Monthly avoided Fuel Cost in J\$ per kWh applicable to the customer's facility during current billing period

F_m = Total Applicable fuel cost for month which ended prior to the first day of the Billing Period

Total applicable fuel cost for the period is:

- a) The cost of fuel consumed in JPS and IPP generating units for the month which ended prior to the first day of the billing period.
- b) An amount to correct for the recovery or under-recovery of total reasonable and prudent fuel costs. Such amount shall be determined as the difference between fuel costs billed, using estimated fuel costs and actual reasonable and prudent fuel costs incurred during the month which ended one month prior to the first day of the billing period.

$Gen_m =$ The total production of electricity from JPS and IPP power plants net station use for the month which ended prior to the first day of the billing period.

The kWh generation in the billing period is the production of electricity net of station use, occurring in the billing period which ended one month prior to the first day of the applicable billing period.

2.7 Pilot Programme

The Office has determined that the SOC arrangement will be initially implemented under a pilot programme limited to **2 years** commencing no later than **May 01, 2012** and capped at an aggregate capacity of **2%** of JPS' highest demand peak. An assessment of the impact on the JPS network will be done at the end of the period with a view to removing or expanding the cap as is deemed appropriate by the Office.

2.8 Key Provisions of the SOC

2.8.1 Contract Term:

The Office has determined that customers will enter into SOCs with a contract term of five (5) years, which term is renewable on terms to be agreed between the parties and shall include any applicable regulations of the Office. This time frame is consistent with the short run avoided cost of generation construct that is offered under the SOC arrangement.

2.8.2 Permits/Licences:

All relevant environmental permits and licences to be obtained by the customer in connection with the customer's renewable energy generation facility are required to be maintained and complied with by the customer throughout the term of the SOC.

2.8.3 Maintenance:

The customer is required to properly maintain the generating facility and retain proper maintenance records.

2.8.4 Purchase and Sale of Electricity:

The customer will continue to receive electricity supply from JPS and pay for consumption in accordance with JPS's standard terms and conditions and the prevailing and applicable electricity rates. JPS will receive and purchase all excess energy generated from the customer's generation facility whenever it becomes available at the short run avoided cost of generation price as verified and published by the OUR from time to time.

2.8.5 Net Billing:

The net billing mechanism under the SOC will consist of the following:

- Statements are required to be generated monthly by JPS detailing energy consumed by the customer and energy supplied to the national grid.
- Amounts payable under the SOC should be the difference of the amounts owed by the customer to JPS for energy consumed from the national grid and amounts owed by JPS to customer for energy supplied by the customer's facility.
- Net amounts payable by the customer are to be paid within three (3) weeks after the date of the statement.
- Net amounts payable by JPS are to be credited to the customer's account monthly and set off against subsequent bills, except that any net amount due by JPS to the customer as at June 30 and December 31 in any year will be paid by JPS to the customer within three (3) weeks of those dates.

2.8.6 Pricing:

Under the net billing methodology:

- Customers will continue to pay the applicable rate for electricity consumed from the national grid as approved by the Office from time to time.
- JPS will pay the short run avoided cost of generation rate which shall be the system's total monthly fuel cost, (in month i) divided by the net generation (in month i) plus 15% premium for energy supplied to the national grid.
- The formula for calculating the energy payment and any attendant fees is set out in Schedule 3 of the SOC.

2.8.7 Metering:

Revenue class demand meters shall be used to measure the interchange of energy from the national grid and the customer's renewable facility. The meters shall be the property of JPS and purchased at the cost of the customer, except that where the customer already has a meter which is to be replaced with a revenue class demand meter, then the customer will only be required to pay the difference between the cost of the revenue class demand meter, and the value of the meter being replaced. Also, in the event that the customer opts to install a production meter on his or her generating facility to enable auditing and monitoring of the facility's profile, all costs associated with the installation of such a meter shall be borne by that customer.

2.8.8 Discrepancies:

Where the meter is found to be inaccurate or malfunctioning, JPS and the customer will use all available information to agree the energy consumed/supplied and amounts payable during the period of inaccuracy or malfunction, failing which the matter may be submitted to the OUR for resolution. Customers may, with notice to JPS have the meter tested by the Bureau of Standards Jamaica at the customers cost.

2.8.9 Security Deposit:

Customers who are parties to a SOC are required to continue to maintain the security deposit payable under JPS's Standard Terms and Conditions of electricity supply to its customers.

2.8.10 Insurance:

Customers engaged in the SOC arrangement are required to establish and maintain insurance coverage for loss and damage resulting from the operation of its generating facility.

2.8.11 Disconnection:

JPS may disconnect the customer's generation facility from the national grid for non-payment of sums owing by the customer to JPS.

2.8.12 Technical Requirements:

- The customer's generation facility shall be properly tested, commissioned and certified by the Government Electrical Inspector.
- The customer's facility shall be designed, constructed and operated in accordance with all applicable industry standards and JPS technical guidelines.
- Customers are required to install an interconnection disconnect switch and a generator disconnect switch to facilitate interruption of energy from their generation facilities or disconnection of the generation facilities as contemplated under the SOC.

ANNEX A: OUR Responses to Consultation Comments/Queries
QUESTIONS AND ANSWERS FROM THE STANDARD OFFER CONTRACT
CONSULTATION

	RELEVANT PROVISIONS OF THE SOC	QUERY/COMMENT	RESPONSE
1.	Clause 7: ENERGY PAYMENT	I was disappointed to see that net billing was chosen as the methodology to be adopted. The price offered is simply insufficient to provide a real incentive for small-scale generation of electricity from renewable energy resources. Not only is the kWh price unattractive, but the contract period of five years is also inadequate for the consumer/generator to recover his investment. If the government is serious about providing an incentive for persons to invest in generation from renewable energy, that objective will not be achieved with the currently proposed approach. It is interesting to note that in Grand Cayman, where the price of electricity to the average consumer is also about US\$0.3/kWh, a Feed-In-Tariff (FIT) regime is being proposed in which the generator would be paid US\$0.37/kWh over a contract period of 20 years. I think you know that I am a strong	a) Customers may choose to generate electricity from renewable sources for their own use. If the customer produces any excess electricity (beyond what is needed to meet the customer's own needs) the OUR through the Standard Offer Contract (SOC) arrangement is providing the opportunity for the legitimate purchase by the utility company of that excess electricity at a wholesale or 'avoided cost' price. The excess energy will be metered an advance smart meter that must be installed at the customer's expense. Net Metering facilitates energy billing based on the difference of the kWh exchanged between the customer and JPS. It assumes that these kWh exchanged by the utility company and the customer are similarly priced. Net Billing on the other hand recognises that there is a difference in the price of the kWh exchanged between the utility company and the

	RELEVANT PROVISIONS OF THE SOC	QUERY/COMMENT	RESPONSE
		<p>proponent of FIT, but will not rehash what I see as the reasons for it being the pricing methodology being most often adopted worldwide today. Why is Jamaica different?</p>	<p>customer and facilitates billing based on a set off of amounts payable by the customer to JPS for kWh consumed by the customer from the grid and sums payable by JPS in respect of kWh supplied by the customer to grid.</p> <p>Net Billing has been chosen by the OUR as the appropriate methodology for the SOC arrangement as it enables the implementation of the fundamental regulatory principle of the fair allocation of cost.</p> <p>The kWh setoff mechanism in Net metering would allow the customer supplying kWh to the grid to receive a benefit equivalent to the retail tariff payable to JPS. This retail tariff however serves to cover the costs to JPS to operate and maintain the entire electricity infrastructure in Jamaica. The customer supplying energy would therefore be compensated for costs that it has not incurred thus receiving a rate far in excess of the costs of supplying its energy to the grid.</p>

	RELEVANT PROVISIONS OF THE SOC	QUERY/COMMENT	RESPONSE
			<p>The increased benefit to the customer supplying energy to the grid would eventually have to be recouped from the other JPS customers through the JPS tariffs and/or a subsidy.</p> <p>(b) If the intent of the renewable energy investor is to supply energy to the grid as a going business concern, as is the case of an independent power producer, then the investor would have to supply electricity to the grid via a process other than the SOC construct (i.e. via competitive tender or unsolicited proposal). These other procurement procedures are outlined in the Office of Utilities Regulation “Guidelines for the Addition of Generating Capacity to the Public Electricity Supply System” Document number Ele 2005/08.1. Here the investor would negotiate a power purchase agreement directly with JPS with a longer contract tenure and rates reflecting a reasonable return on investment.</p> <p>(c) Under a Feed in Tariff (FIT) regime tariffs which would exceed the cost of energy from conventional plants are</p>

	RELEVANT PROVISIONS OF THE SOC	QUERY/COMMENT	RESPONSE
			<p>permitted based on the type of renewable technology so as to provide incentives for an increased penetration of that particular renewable technology. FIT is contrary to the principle of least cost energy pricing currently being pursued by the OUR. Any implementation of FIT would therefore require a specific policy directive from the Government of Jamaica.</p>
2.		<p>As currently written, it seems that contracts will be entered into only with persons who are also JPS customers. In the event that someone owned a generating facility at a site where he was not connected to the JPS network, for instance on a farm with no buildings but on which a 50 kW hydroelectric unit was installed, would he be allowed to sell energy to JPS?</p>	<p>The SOC arrangement is only open to customers of JPS.</p> <p>Persons who are however interested in supplying energy to JPS other than under the SOC construct may do so in accordance with the other forms of procurement for new generation capacity as approved by the OUR for which they qualify. These other procurement methodologies include:</p> <ol style="list-style-type: none"> 1. Evaluation of unsolicited proposals for capacity additions of 15MW or less (conventional and renewable technologies). 2. Competitive tender procurement of additions in excess of 15MW (conventional and renewable

	RELEVANT PROVISIONS OF THE SOC	QUERY/COMMENT	RESPONSE
			<p>technologies).</p> <p>3. Evaluation of unsolicited proposals for cogeneration plants with per KW cost of energy equal to or below the avoided cost published by the OUR from time to time.</p> <p>4. Supply of dumped energy (from conventional or renewable sources) via a standardized power purchase agreement with JPS.</p> <p>Further details on the procurement methodologies can be found in the OUR's "Guidelines for the Addition of Generation Capacity to Public Electricity Supply System Ele 2005/08.1".</p> <p>It should be noted that in these instances the supplier would have to negotiate and enter into a power purchase agreement with JPS.</p>
3.	Schedule 3: ENERGY PAYMENT CALCULATION	<p>I do not fully understand Schedule 3, "Energy Payment Calculation and Charges".</p> <ul style="list-style-type: none"> - Why is the avoided cost stipulated in US dollars? - It should be simply unacceptable that the 	(a) US dollar issue: Most generation costs are foreign related or quoted in foreign currency. As the United States dollar is universally accepted as a currency of reference it has been used as the reference currency for purposes of energy

	RELEVANT PROVISIONS OF THE SOC	QUERY/COMMENT	RESPONSE
		<p>avoided cost rate in effect at the Contract Date should remain fixed for the life of the contract. Even worse Clause 3.2. of the draft document states that the <i>“energy price payable shall be the lesser of the long-run avoided costs and the energy price in the original contract”</i>. That formulation must have been calculated to be a disincentive to investment in electricity generation from renewable resources.</p> <p>- What is “Premium”?</p>	<p>payment calculation. Use of the Jamaican dollar for these purposes would require constant adjustments to reflect the US indexation.</p> <p>(b) <u>Investment Disincentive issue:</u></p> <p>(i) The Office has determined that the SOC should have a tenure of five (5) years as the contract is contemplated as a short term arrangement. However the Office is of the view that the provisions in the SOC regarding extension of the contract term is sufficiently robust to facilitate customers who may wish to participate in the SOC arrangement for longer periods.</p> <p>(ii) The Office has noted the concerns raised regarding the provisions that fix the rate payable for energy supplied for the life of the contract term. The intent is that the rate paid for electricity supplied to the grid from the customer’s renewable energy plant under the SOC arrangement reflects the avoided cost rate as may be applicable from time to time. The Office acknowledges that this rate may in fact be changed during the tenure of a particular</p>

	RELEVANT PROVISIONS OF THE SOC	QUERY/COMMENT	RESPONSE
			<p>customer's SOC arrangement with JPS. In order to achieve the intent as indicated, the Office has determined that the SOC provisions will be amended to reflect that the price payable by JPS for energy supplied to the grid under the SOC arrangement will be the prevailing short run avoided cost of generation as is determined and published by the Office from time to time. The price payable will therefore no longer be fixed for the life of the contract at the rate applicable at the beginning of the contract term as was originally contemplated by the draft SOC.</p> <p>(c) Premium: The Government of Jamaica has determined that renewable energy plants be allowed to sell electricity to JPS at a maximum price of 15% above the avoided cost of energy policy. "Premium" therefore refers to this incentive of up to 15%. The premium has been mandated by the Government to encourage the development of renewable energy technology.</p>

	RELEVANT PROVISIONS OF THE SOC	QUERY/COMMENT	RESPONSE
4.	Clause 10: METERING	10.1.1 requires the installation of demand and energy meters with remote monitoring capability and import/export “net billing” registration. The owner of the generating facility will be required to compensate JPS for “any differential or replacement cost of any existing meter, if such replacement is deemed necessary by JPS”. Obviously replacement will be necessary, since currently no JPS customer is supplied through a “ <i>demand and energy meter with remote monitoring capability and import/export “net billing” registration</i> ”. The remote monitoring capability is a feature which JPS intends to incorporate in all new meters, is of no significant advantage to the consumer, and should therefore be to JPS’ cost. In this instance, as in all supply contacts currently in force, JPS should bear the full metering costs.	<ol style="list-style-type: none"> 1. Some customers do have demand and energy meters, although it may not have remote monitoring capability. There is a cost attached to enabling any additional feature of the demand and energy meters, including net billing and remote monitoring. 2. The cost of meters for normal JPS customers are paid for by the customers in the customer charge/tariff although it is spread across the particular customer class. 3. The OUR will require JPS to declare the cost of a normal customer meter at today’s price and the cost of the most economical meter that has the net metering capabilities (the minimum functional specifications for net billing). JPS will also be required to provide a valuation of the existing meter of the customer who has applied to participate in the SOC arrangement. The OUR will then determine what is a fair price for the differential, taking into account the value of the existing meter and the reasonable cost of a demand meter. Anything in excess will

	RELEVANT PROVISIONS OF THE SOC	QUERY/COMMENT	RESPONSE
			be JPS's cost.
5.	Clause 5: CONDITIONS PRECEDENT	The draft contract implies in a number of instances (e.g.14.2.2) that the qualifying facility must be located on premises owned by the Qualifying Entity. Is this a condition and, if so, what is the reasoning behind that position.	<p>The draft SOC requires that the Qualifying Facility (QF) must be on premises either owned by the Qualifying Entity (QE) or leased/rented by that person. If the latter applies, then the QE must provide evidence that the landowner has consented to the operation of the QF on the premises.</p> <p>This is not unusual in normal arrangements with JPS where a tenant or other occupier of land must provide evidence of permission of the owner to enter into a contract with JPS for electricity supply to the premises. Likewise it is not unreasonable for JPS to be satisfied that the customer is authorised through land ownership or permission of the landowner to use the land for the purposes of the SOC arrangement.</p>
6.	RECITALS	<p>Page 1 Item 6 – Legal Preamble (Whereas:)</p> <p>JPS wishes to purchase such energy from the QE on the terms and conditions set forth herein and <u>JPS retains the right to refuse such energy due to adverse Grid Conditions</u></p>	JPS has a licence obligation to provide “an adequate, safe and efficient service” As the operator of the national grid JPS must ensure the safety and security of the grid under all operating conditions and reliability and quality of electricity supplies as per its licence. It is

	RELEVANT PROVISIONS OF THE SOC	QUERY/COMMENT	RESPONSE
		<p>Comment: Tends to work against guaranteed access to the grid.</p>	<p>therefore important that JPS retains the right to refuse a customer's energy in situations of adverse grid conditions. It is our view that this provision does not inhibit grid access.</p>
7		<p>Page 2 Item 10 – Legal Preamble (Whereas:) <i><u>The energy to be supplied by the QE falls within the approved capacity of the Net Billing program which is capped in aggregate at three percent (3%) of JPS's highest system peak for the "pilot period". The said pilot period shall not exceed twelve (12) months commencing on []. The capped aggregate of three percent (3%) will be revised at the end of the pilot period.</u></i></p> <p>Comment: The considerations expressed here would likely be better placed in an overarching policy framework (such as a "Renewable Energy Act" mentioned earlier) where the general direction is given; and national guidelines and targets such as percentage contributions to peak and timeframes for pilots and implementations are set.</p>	<p>The clause seeks to define the degree of renewable energy penetration from small installations (0 – 100kWh) that will be allowed during the pilot. The intention of starting with a pilot was to enable the OUR and JPS to do a proper assessment of the impact of the proposed net billing arrangement on the electricity system.</p>

	RELEVANT PROVISIONS OF THE SOC	QUERY/COMMENT	RESPONSE
8.		<p>Item 2.1.4 <u>For purposes of this clause, “Material Modifications” refers to any change in the status, specifications or information submitted by the QE regarding the QF at the time of original application, including but not limited to modifications of system size of the QF, ownership of the QF, system component design, system or component specification, applicable certifications or approval of the QF by relevant authorities or change in technology..</u></p> <p>Comment: Could be included in Schedule 1 – Definitions</p>	<p>It is agreed that this can be placed in the Definition section but it is proposed that the definition also remain in clause 1.2.4 because the definition is integral to the specific clause in which it is mentioned.</p>
9.		<p>Item 5.1 (iii) <u>QE shall have obtained the requisite insurance policies in compliance with Clause 17.0</u></p> <p>Comment: May prove inimical to smaller QE’s (especially residential). Seems to be an avoidable burden – and possible disincentive. Other mechanisms for recovery of damages to JPS could be explored</p>	<p>Because of the potential hazard that can occur from an electrical installation, including generating equipment, in particular, its impact on the national grid, it is important that there should be some insurance or other financial coverage in place to fund the liability which may flow from this risk. JPS in turn has liability insurance coverage in place for its electrical installations and other facilities.</p>

	RELEVANT PROVISIONS OF THE SOC	QUERY/COMMENT	RESPONSE
10.		<p>Item 6.3 <i>The QE shall retain any and all rights to own and to sell any and all Environmental Attributes (e.g. Carbon credit) associated with the energy generated from the QF <u>provided JPS has right of first refusal. JPS must respond to a bona fide offer within twenty (20) Business Days of notification of such offer by the QE.</u></i></p> <p>Comment: No apparent reason for JPS to have right of first refusal. QE should properly have the right to sell to the highest bidder – especially given the burgeoning nature of the global carbon market.</p>	<p>The issue of the sale of carbon credits is not integral to the net billing arrangement. In light of the objection to this clause received from a number of stakeholders in the consultation, we have decided that the clause will not be included in the SOC.</p> <p>The sale and purchase of carbon credits can be negotiated separately by JPS and the customer outside of the SOC arrangement.</p>
11.		<p>Item 10.1.1 <i>JPS shall provide and install revenue class demand and energy meters, having remote monitoring capability and import/export (“net billing”) registering facility measured at the interconnecting point to the JPS Grid. <u>The QE shall be responsible for paying JPS any differential cost for the replacement of any existing meter with the aforesaid meter, if such replacement is deemed necessary by JPS.</u></i></p>	<p>It is usual for JPS to have ownership of the meters as well as the obligation for maintenance of the meters after installation. In fact, this forms part of the JPS Standard Terms and Conditions which govern the contractual relationship between JPS and its customers.</p> <p>The obligation of the QE to pay the differential cost between the new demand meter and their meter that is being replaced is a cost recovery mechanism. In normal</p>

	RELEVANT PROVISIONS OF THE SOC	QUERY/COMMENT	RESPONSE
		<p>Comment: Incongruous with items 10.1.4 and 16.0</p>	<p>circumstances where JPS installs customer meters JPS recovers these costs under the electricity tariff. Requiring the QEs to pay for the incremental cost of the demand meters will lessen the level of subsidy that other customers who are not participating in the SOC arrangement would have to give via the tariff.</p>
12.		<p>Item 10.1.5 <u>For QEs, replacement of the revenue class demand and energy meters if and when required will be provided at the sole expense of the QE.</u></p> <p>Comment: Incongruous with items 10.1.4 and 16.0</p>	<p>We do not agree that this clause is incongruous with the provisions of 10.1.4 and 16.0 which we believe are standard for electricity supply contracts.</p> <p>However we think it prudent to restrict the circumstances in which the customer will be required to pay the cost of replacing the demand meter by excluding situations where the meter is defective or damaged due to some act or negligence of JPS. Where there is disagreement as to cause of replacement, then matter may be submitted to OUR for determination.</p>
13.		<p>Item 16.1 (d) <u>The negligence or wilful misconduct of the Indemnifying Party or its contractors, agents, servants or employees; or</u></p>	<p>We disagree with the comment. If the QE, in the position of "Indemnified Party" suffers loss due to negligence or misconduct of JPS or its independent contractors,</p>

	RELEVANT PROVISIONS OF THE SOC	QUERY/COMMENT	RESPONSE
		<p>Comment: This appears to indemnify JPS against damage claims resulting from (more than infrequent occurrences of) events such as improper restoration of power, voltage upgrade and other such works...especially those carried on by contractors. While seemingly indemnifying both parties equally, in practice it would likely favour the JPS.</p>	<p>in the position of “Indemnifying Party”, then the QE can claim under the indemnity against JPS.</p> <p>Likewise of JPS, in the position of “Indemnified Party” suffers loss from the negligence or misconduct of the QE or its contractors, in the position of “Indemnifying Party”, then JPS can claim under the indemnity against the QE.</p> <p>If the QE can show that the activities cited – improper restoration of power, voltage upgrade etc - is as a result of the negligence or misconduct of JPS or its contractors, then the QE can make a claim against JPS under this indemnity clause as currently worded.</p>
14.		<p>Item 17.1 <i>The QE shall procure or cause to be procured and shall maintain throughout the entire Term of this Contract, the requisite insurance issued by an insurer duly licenced under the Insurance Act acceptable to JPS (such policy or policies, collectively, the “QE Insurance”). A certified copy of the certificate of insurance shall be delivered to JPS at least ten (10) Business Days prior to the start of any</i></p>	<p>The reference to “Interconnection Contract” appears to be an error and should be deleted.</p>

	RELEVANT PROVISIONS OF THE SOC	QUERY/COMMENT	RESPONSE
		<p><i>interconnection work. At a minimum, the QE Insurance shall contain (a) an endorsement providing coverage, including products liability/completed operations coverage for the term of this Contract, and (b) a broad form contractual liability endorsement covering liabilities (i) which might arise under, or in the performance or non-performance of, this Contract and the <u>Interconnection Contract</u>, or (ii) caused by operation of the QF or any of the QE's equipment or by the QE's failure to maintain the QF or the QE's equipment in satisfactory and safe operating condition. Without limiting the foregoing, the QE Insurance must be reasonably acceptable to JPS. Any premium assessment or deductible shall be for the account of the QE and not JPS.</i></p> <p>Comment: Unclear as to what is being referred to here.</p>	
15.		<p>Schedule 2 - Item 5.7.1 & 5.7.2 <u>5.7.1 The QF shall not create power system disturbances that will breach JPS standards and power system parameters as</u></p>	<p>Power quality in this context will be defined in the generation and distribution codes to be approved by the OUR and published by JPS shortly.</p>

	RELEVANT PROVISIONS OF THE SOC	QUERY/COMMENT	RESPONSE
		<p><u>outlined in the Generation Code and Distribution Code.</u></p> <p><u>5.7.2 JPS reserves the right to install test equipment as may be required to perform a disturbance analysis and monitor the operation of the QF to evaluate the quality of the power produced. If the system is demonstrated to be a source of interference, and the interference breaches JPS standards, requirements under the Generation Code and Distribution Code or generally accepted industry standards, then the QF shall be isolated from the JPS distribution network either by using the generator or interconnection disconnect switch until corrections are made to remedy the interference.</u></p> <p>Comment: Rendered superfluous in the absence of power quality monitoring on the JPS distribution grid (as well as published power quality standards). [NB: comment is based on the author's prior knowledge of the JPS distribution grid and may be outdated]</p>	

	RELEVANT PROVISIONS OF THE SOC	QUERY/COMMENT	RESPONSE
16.		<p>Schedule 3 - Item 2 <i>DPC = Direct Program Costs in Jamaican Dollars, which is billed monthly for the <u>cost of meter reading, billing and other appropriate administrative costs to be approved by the Office of Utilities Regulation on recommendation by JPS.</u></i></p> <p>Comment: Costs mentioned here likely already recovered in JPS tariff (and hence in the Avoided Cost Rate – AVR)</p>	<p>This cost component is independent of the avoided cost rate (AVR).</p> <p>The DPC seeks to cover the additional administrative costs and activities associated with the net billing arrangement. This will be a fixed cost component to be determined by the OUR. The OUR will assess each component of this cost as proposed by JPS to ensure that it does not include costs already recoverable by JPS under the existing rate schedule.</p>
17.		<p>On the matter of Carbon Credit for the RE provider, who gets the credit, the RE or JPS?</p>	<p>The QE will be the owner of the carbon credits unless they sell it or otherwise assign it to some other person or entity.</p>
18.		<p>Does the avoided cost of generation varies monthly depending on the cost of fuel or is it a fixed price?</p>	<p>For the Standard Offer Contract arrangement the Short Run Avoided Cost (SAC) will be used. The SAC rate will be the price per kWh as calculated from month to month and will represent JPS system cost of fuel for the month in which energy is supplied divided by the net generation output for the month. The SAC will vary monthly</p>
19.		<p>Why does JPS have the right of first refusal?</p>	<p>See response at question 10 regarding “Item 6.3” above.</p>

	RELEVANT PROVISIONS OF THE SOC	QUERY/COMMENT	RESPONSE
20.		Who should be providing the incentive for RE development in terms of duties, taxes and financing? If not the OUR, can the OUR direct prospective participants where to go to get these incentives?	Tax and other incentives are policy issues which fall within the purview of the Government of Jamaica. Interested persons should therefore contact the Ministry of Energy and Mining which has direct responsibility for the country's energy policy and the Ministry of Finance which deals with taxation and import and other duties for further details.
21.		Will the SOC be subjected to review by an independent legal team other than JPS legal team?	The OUR has done both a legal and technical review of the SOC document. Interested persons are free to have their own legal counsel review the SOC prior to execution.
22.		Is there an advantage of existing customers applying as opposed to those who are not customers?	Only customers of JPS can access the net billing facility and by extension the SOC arrangement. Therefore a person must be a JPS customer at the time of executing the SOC.
23.		Are there any existing contracts under net billing arrangement?	There are no net billing contractual arrangements in place with the JPS. The SOC will introduce this arrangement into the Jamaican electricity sector for the first time.
24.		Can you currently install a system with Battery storage and then make an application for the SOC?	Persons may generate electricity for their own use without a contract or other legal instrument using their own facilities and

	RELEVANT PROVISIONS OF THE SOC	QUERY/COMMENT	RESPONSE
			storage devices. If they wish, they may subsequently apply to participate in the SOC arrangement with JPS. Note however, they must be a JPS customer at the time of executing the SOC.
25.		Why does the QF have to pay for the meter? Shouldn't JPS be responsible for this?	The obligation of the QE to pay for the meter accords with the current arrangement whereby customers pay for the cost of meters, albeit, as part of their overall electricity tariff. Also see response at question 11 above.
26.		How will QF be compensated for aggregate reactive power supplied and how will you account for the power factor?	There is no provision for compensation for reactive power (VARs) under the net billing scheme. The QE should ensure that any VAR requirement of the generating facility is accounted for in the facility's design. Note that if VARs are drawn from the electricity system, it will be priced in accordance with the rate schedule at a specified power factor.
27.		What is the cost of the licence that is required for implementation of the SOC?	It has been determined that there will be no licence fee payable by customers engaged in the SOC arrangement. There will however be a licence application processing fee as follows:

	RELEVANT PROVISIONS OF THE SOC	QUERY/COMMENT	RESPONSE
			<ul style="list-style-type: none"> • \$2,000.00 for residential applicants • \$10,000.00 for commercial applicants
28.		When is the target date for application of the SOC by QF to JPS?	It is proposed that the programme will be implemented no later than November 30, 2011.
29.		Why when the QF sells energy to the grid from renewable source, the price is not one-to-one using one meter?	<p>The price of the energy exchanged under the SOC arrangement is not “one-to-one” because there is a difference in the tariff payable for energy exported to the grid and the tariff payable for energy obtained from the grid.</p> <p>See also response at question 1 above regarding net billing.</p>
30.		Why is the avoided cost not related to the cost of fuel and reflecting the monthly fuel rate?	<p>The avoided cost is related to the cost of fuel and all other variable cost inputs for the generation system.</p> <p>See also response at question 18 above.</p>
31.		Why is it that the SOC is valid for five years? Isn't the contract period too short given that the equipment life is over twenty years?	<p>The SOC arrangement is not tied to the economic life of the customer's generating equipment.</p> <p>It should be noted that the contract is eligible for extension and renewal and therefore could potentially be used for the full</p>

	RELEVANT PROVISIONS OF THE SOC	QUERY/COMMENT	RESPONSE
			<p>economic life of the equipment.</p> <p>See also response at question 3 paragraph (b)(i) above.</p>
32.		Why introduce insurance in this SOC when customers are already paying for insurance through self insurance fund?	The insurance coverage referenced in the SOC is to address risk coverage arising from the operation of the customers' equipment, i.e. the QF. The JPS self insurance fund provides risk coverage for JPS's transmission and distribution infrastructure, which is isolated from the JPS generation assets.
33.		What is OUR position on net metering? Net billing cannot work. Without net metering photovoltaic system will not work. Can you say if you seriously looked at net metering and why you choose not to go net metering?	<p>See response at question 1 above.</p> <p>It should be noted that the SOC is not restricted to photovoltaic systems, but encompasses all renewable energy technologies including wind, hydro, solar and biomass.</p>
34.		Is it correct that every six months if there is credit the customer will get a cheque from JPS?	Clause 7.1.2 of the SOC provides that any credit amount owing to the customer from JPS under the contract as at June 30 and December 31 in each year shall be payable within fifteen business days of those respective dates.
35.		Will regenerative power be considered under this SOC? How does Regenerative power get accounted for under the SOC?	Regenerative power is tied to conventional generation technologies and is therefore not considered a renewable. Only generation facilities using

	RELEVANT PROVISIONS OF THE SOC	QUERY/COMMENT	RESPONSE
			<p>renewable technologies are eligible for participation in the SOC programme.</p> <p>Regenerative power application can be accommodated under a dumped energy arrangement. See section 6.4 of the Regulatory Policy for the Addition of Generating Capacity for further details.</p>
36.		Is battery system allowed under this SOC?	If the battery system is based on renewable technology it may be accommodated under the SOC arrangement.
37.		Solar Panel Investors want incentive to make profit. Does the SOC address whether or not the government and the OUR are trying to incentivise renewable energy development to reduce the dependence on fuel oil?	<p>While the SOC does not specifically address the issue of incentivising renewable energy development, it is anticipated that customer participation in the SOC arrangement will contribute to the achievement of the Government's goal of having renewable resources as at least 20% of Jamaica's energy mix by 2030. This objective is expressed in the Government's National Energy Policy 2009 - 2030.</p> <p>See also response at question 20 above.</p>
38.		What are the considerations/assumptions that go into the pricing methodology for the customer?	The pricing methodology of the "Avoided cost" will send appropriate price signals and is consistent with the cost reflective principle mandated by the All-

	RELEVANT PROVISIONS OF THE SOC	QUERY/COMMENT	RESPONSE
			Island Electric Licence. The assumption is that the methodology appropriately allocates and recovers transmission, distribution, and other fixed costs that are embedded in average retail kWh rates
39.		The SOC does not mention other fuel source of energy outside renewable, if a facility using fossil fuel is proposed under this contract will it be qualified?	The SOC arrangement is only open to JPS customers with electricity generation facilities which use renewable technologies as its primary energy source.
40.		Did OUR do analysis on the Avoided cost of generation using various cost of capital? And is the OUR strategically avoiding net metering to see if stakeholders will buy into net billing?	<p>The analysis which the OUR has done with regard to the avoided cost of generation is detailed in the documents "Office of Utilities Regulation Declaration of Indicative Generation Avoided Costs" Document Number Ele 2010/10009 DCL001 effective December 10, 2010 and the "Generation Expansion Plan 2010" Document Number Ele 2010007_REP001 dated August 2010.</p> <p>Both documents can be accessed at the OUR website at www.our.org.jm.</p> <p>Also see response to question 1 above regarding net billing and net metering.</p>

	RELEVANT PROVISIONS OF THE SOC	QUERY/COMMENT	RESPONSE
41.		What assumptions go into the pricing model to determine the avoided cost? Was the payback period taken into consideration?	<p>For details of the assumptions used to determine the avoided cost of generation see the documents “Office of Utilities Regulation Declaration of Indicative Generation Avoided Costs” Document Number Ele 2010/009 DCL001 effective December 10, 2010 and the “Generation Expansion Plan 2010” Document Number Ele 2010007_REP001 dated August 2010.</p> <p>Both documents can be accessed at the OUR website at www.our.org.jm.</p> <p>Note that payback in the context of generation planning is a function of project appraisal to determine financial viability of the generation project, which is task usually undertaken by the project owner. This is not taken into consideration in the SOC arrangement.</p>
42.		Does the Minister have to provide licences for QF facilities less than 10 kW?	The Electric Lighting Act empowers the responsible Minister to issue licences to persons wishing to supply electricity for any public or private purpose.

ANNEX B: Standard Offer Contract

JAMAICA PUBLIC SERVICE COMPANY LIMITED
STANDARD OFFER CONTRACT
FOR
THE PURCHASE OF AS-AVAILABLE ENERGY
FROM
INTERMITTENT RENEWABLE ENERGY FACILITIES
UP TO 100 kW

BETWEEN

QUALIFYING ENTITY

AND

JAMAICA PUBLIC SERVICE COMPANY LIMITED (JPS)

Table of Contents

Clause	Description	Page
1.0	Definitions & Interpretations	2
2.0	Qualifying Facility Status	3
3.0	Term of Contract	4
4.0	Important Dates and Milestones	5
5.0	Conditions Precedent	5
6.0	Sale of Electricity by the QE and Purchase from JPS	7
7.0	Energy Payment	7
8.0	Interruption or Reduction of Energy from QF	8
9.0	Maintenance and Permits	9
10.0	Metering	9
11.0	Interconnection Facility and Parallel Operation Arrangements	11
12.0	Security Deposit	11
13.0	Events of Default	11
14.0	Disconnection of Service and Termination of Contract	13
15.0	JPS's Rights in the Event of Default	14
16.0	Indemnification	14
17.0	Insurance	15
18.0	Force Majeure	16
19.0	Representations, Warranties, and Covenants of QE	17
20.0	General Provisions	19
	SCHEDULES	
Schedule 1	Definitions	i
Schedule 2	Interconnection & Parallel Operation Arrangement	v
Schedule 3	Energy Payment Calculation & Charges to QE	x
Schedule 4	Relevant OUR Documents	xii
	EXHIBITS	
Exhibit A	Application form to Supply Electricity to JPS	xiii
Exhibit B	Description of Qualifying Facility	
Exhibit C	Technical Definitions	
Exhibit D	Description of Interconnection Facility	

**STANDARD OFFER CONTRACT FOR THE PURCHASE OF AS-AVAILABLE
ENERGY FROM INTERMITTENT RENEWABLE FACILITIES OF
UP TO 100 kW**

THIS CONTRACT is made on the _____ day of _____ Two Thousand and _____ (hereinafter referred to as the “Contract Date”) **BETWEEN JAMAICA PUBLIC SERVICE COMPANY LIMITED**, a Company duly incorporated under the Laws of Jamaica and having its registered office at 6 Knutsford Boulevard, Kingston 5 in the parish of Saint Andrew (hereinafter referred to as “**JPS**” which expression, where the context so admits includes its successors and assigns) on the ONE PART AND _____ in the parish of _____ (hereinafter referred to as the Qualifying Entity or “**QE**”) on the OTHER PART. Both JPS and the QE are herein referred to individually as a “Party” and collectively as “the Parties”.

WHEREAS:

1. JPS is a company licensed to generate, transmit and distribute electricity throughout the island of Jamaica through its several power stations and the JPS Grid;
2. The QE has submitted an application to the Office of Utilities Regulation (the “OUR”) and JPS to supply excess energy to JPS based on the Net Billing principle;
3. The QE has represented to JPS that it has or is in the process of obtaining all requisite licences, permits and approvals and owns and operates a Qualifying Facility (QF) in accordance with the Electricity Sector Guidelines or any modification, consolidation or re-enactment thereof;
4. The QE operates the QF to produce as-available energy to satisfy its internal demand and sell the excess to JPS;
5. The QE wishes to sell to JPS the excess energy generated by the QF, the output of which shall not exceed the Gross System Output;
6. JPS wishes to purchase such energy from the QE on the terms and conditions set forth herein and JPS retains the right to refuse such energy due to adverse Grid Conditions;
7. The QE desires to interconnect the QF to JPS’ distribution network;
8. JPS has received, reviewed and accepted the QE’s application and supporting documentation for the said interconnection. The completed application is attached as Exhibit A and incorporated into this Contract (hereinafter referred to as the “Application”);

9. The QE agrees to abide by and ensure that the QF operates in accordance with the Interconnection Guidelines of JPS ; and
10. The energy to be supplied by the QE falls within the approved capacity of the Net Billing program which is capped in aggregate at two percent (2%) of JPS's highest system peak for the "pilot period". The said pilot period shall not exceed twenty-four (24) months commencing on May 1, 2012 The capped aggregate of two percent (2%) will be revised at the end of the pilot period and such other modification as may be determined by JPS and the Office jointly.

NOW THEREFORE, in consideration of the mutual benefits to be derived and the representations and warranties, conditions and promises herein contained, and intending to be legally bound hereby, the Parties hereby agree as follows:

1.0 Definitions & Interpretations

- 1.1 All technical terms contained in this Contract shall have ascribed to them the ordinary definition used in the industry save and except where such meaning conflicts with the definitions contained in Schedule 1 hereto or otherwise in this Contract.
- 1.2 In this Contract:
 - 1.2.1 Expressions defined in Schedule 1 shall bear the respective meanings set out therein;
 - 1.2.2 Headings are for reference purposes only and should not be incorporated into this Contract and shall not be deemed to be any indication of the meaning of the clauses to which they relate;
 - 1.2.3 The singular includes the plural and vice versa;
 - 1.2.4 Terms not herein defined shall have the meanings ordinarily ascribed thereto in the Oxford English Dictionary and also in the power industry. In the event of a conflict between the definition of a term as set out in the Oxford English Dictionary and the definition as applied ordinarily in the power industry, the definition applied in the power industry shall prevail;
 - 1.2.5 References to Clauses, Recitals and Schedules are, unless the context otherwise requires, references to Clauses of, and Schedules and Recitals to, this Contract;
 - 1.2.6 References to any Contract, Enactment, Ordinance or Regulation includes any amendment thereof or any replacement in whole or in part.

1.2.7 In the event of any conflict between the body of this Agreement and any of the Schedules attached hereto the relevant provisions shall be construed as complementary rather than conflicting wherever possible, but if a complementary construct is not possible, then the terms and provisions of the body of this Agreement shall take precedence over the Schedules.

1.2.8 All agreements on the part of either of the Parties which comprise more than one person or entity shall be joint and several and the neuter singular gender throughout this Contract shall include all genders and the plural and the successor in title to the Parties.

2.0 Qualifying Facility Status

The QE either contemplates installing and operating or has installed and is operating a QF comprised in whole or in part of the following information described in **Table 1** below.

TABLE 1

TECHNOLOGY AND SYSTEM CAPABILITIES	
Address of QF	Street name & number: City: Parish:
System Type (Induction, Synchronous, Inverter)	
Technology & Energy Source (e.g. PV, wind turbine, hydroelectric)	
System Rating (kVA)	
Maximum Capability (kW)	
Power Factor	
Location of JPS's Connected Feeder	
Possible Interconnection Voltage (kV)	
Projected or Actual Peak Internal Load kW (last 12-Months)	

2.1 Maintaining Qualifying Facility Status

The QE shall use the same energy source and maintain the status of the QF throughout the term of this Contract, unless otherwise agreed by both Parties. The QE shall at all times keep JPS informed of any material changes in its business or operation, which affects its status.

2.1.1 The QE shall give JPS at least thirty (30) Business Days prior notice in writing of plans for any intended Material Modification to the QF.

2.1.2 The notice required by Clause 2.1.1 shall consist of a set of detailed plans of the intended Material Modifications, a revised application for interconnection and any additional supporting documentation as may be reasonably requested by JPS. The QE shall not commence any Material Modifications to the QF until JPS has approved the revised application. This approval shall be provided on or before thirty (30) Business Days of receipt of the revised application for Material Modification or such additional time as may reasonably be required by JPS to process the application. JPS shall specify the reason for requesting such additional time which shall not exceed ten (10) Business Days and which shall be notified by JPS in writing to the QE.

2.1.3 Any Material Modification approved by JPS shall be subject to the terms and conditions of this Contract.

2.1.4 For purposes of this clause, "Material Modifications" refers to any change in the status, specifications or information submitted by the QE regarding the QF at the time of original application, including but not limited to modifications of system size of the QF, ownership of the QF, system component design, system or component specification, applicable certifications or approval of the QF by relevant authorities or change in technology.

2.2 JPS Right to Verify Status

JPS shall have the right upon giving no less than twenty-four (24) hours notice to inspect the QF, and to examine any maintenance records and any other documents of the QE that JPS reasonably deems necessary to verify the conformity of the QF and its operations with the requirements of this Contract. Such inspection may occur between the hours of 8:30 a.m. and 5:00 p.m. on a Business Day unless otherwise agreed by the QE.

3.0 Term of Contract

3.1 The Term of this Contract shall become effective as of the Commercial Operation Date and shall be in effect for five (5) years unless it is earlier terminated pursuant to the provisions of this Contract. Upon termination or expiration of this Contract, the Parties shall be relieved of their obligations under this Contract except for any antecedent breach of any obligations hereunder and the obligation to pay each other all monies accrued under this Contract, which obligations shall survive termination or expiration.

3.2 This Contract may be extended for an additional period on terms to be agreed upon between JPS and the QE in writing and in accordance with any applicable OUR regulations provided that:

- (i) the QE shall have given JPS not less than six (6) Months and no more than twelve (12) months prior written notice of its desire to extend the terms of this Contract;
- (ii) the QE shall have obtained the appropriate approval/licence from the relevant authorities; and
- (iii) no Event of Default has occurred.

The energy price payable by JPS to the QE for the extended Contract shall be the prevailing short run avoided cost of generation as verified and published by the OUR from time to time plus a 15% premium.

4.0 Important Dates and Milestones

As required the important dates and milestones pertaining to this Contract are as follows:

IMPORTANT CONTRACT DATES	
Contract Date	Month _____ Day ____ Year _____
Duration of Licence	5 years
Date Licence was issued	Month _____ Day ____ Year _____
Required Commercial Operation Date	Month _____ Day ____ Year _____ (18 Months within Contract Date)
Commercial Operation Date (Actual)	Month _____ Day ____ Year _____
Contract Termination Date	5 years from Commercial Operation Date
Insurance	10 Business Days before the start of interconnection work

5.0 Conditions Precedent

5.1 Unless otherwise waived in writing by JPS, on or before the Commercial Operations Date, QE shall satisfy the following Conditions Precedent:

- i) QE shall have obtained the Project Consents for which it is responsible under the terms of this Contract;
- ii) QE shall have obtained and supplied to JPS all applicable Licences and approvals from the relevant agencies as may be necessary for operation of the QF, which shall provide that the QE shall have twelve (12) Months to

commence Commercial Operations in accordance with its Licence failing which the QE shall be required to submit to JPS renewed Licences for any Licences which may have expired;

- iii) QE shall have obtained the requisite insurance policies in compliance with Clause 17.0;
- iv) QE shall have delivered to JPS the following:
 - (a) where the QE is non-residential –
 - (i) a copy of its constitutional documents (certified by its corporate secretary as true, complete and up-to-date) of the commercial entity; and
 - (ii) a copy of a corporate resolution approving the terms of this Contract and the transactions contemplated hereby and authorizing one or more individuals to execute this Contract on its behalf (such copy to have been certified by its corporate secretary as true, complete and up-to-date); and
 - (iii) certified proof of ownership of the property on which the QF is located, or if the property on which the QF is located is rented or leased, then evidence of the authorization from the owner of that property for the use of the QF thereon;

OR

- (b) where the QE is residential –
 - (i) certified proof of ownership of the QF; and
 - (ii) certified proof of ownership of the property on which the QF is located, or if the property on which the QF is located is rented or leased, then evidence of the authorization from the owner of that property for the use of the QF thereon;
- v) QE shall be a JPS customer who has entered into a contract with JPS to accept electricity from JPS at the prevailing tariff, as approved by the OUR from time to time.

5.2 Promptly, but not later than seven (7) Business Days, after:

- (i) satisfaction by the QE of the Conditions Precedent specified in Clause 5.1, (or waiver thereof by JPS in writing); and
- (ii) submission of the documentary proof that the QF has been certified by the Government Electrical Inspector and that the QF is compliant

with the requisite standards outlined in Clause 5.1.1 and the requirements of 6.0 of Schedule 2;

and provided that no Event of Default has occurred and/or is continuing, JPS shall deliver written Notice to the QE confirming such satisfaction. The date upon which the Notice is delivered shall constitute the Commercial Operation Date.

5.3 Unless all Conditions Precedent are satisfied by the QE on or before the Required Commercial Operation Date or any such Conditions Precedent are waived in writing by JPS, this Contract shall terminate on the Required Commercial Operation Date and neither Party shall have any further liability to the other Party under this Contract, except for the obligation to pay each other all monies accrued under this Contract, which obligation shall survive termination.

6.0 Sale of Electricity by the QE and Purchase from JPS

6.1 Sale to JPS

Subject to, and in accordance with, the terms of this Contract, the QE shall sell As-Available Energy to JPS produced by the QF, and JPS shall purchase from the QE As-Available Energy.

6.2 Purchase of Electricity from JPS

Subject to, and in accordance with, the terms of this Contract and the applicable Standard Terms and Conditions governing supply of electricity to JPS' customers, JPS shall make available and sell to the QE, and the QE may purchase from JPS, energy at and in accordance with the then JPS prevailing Electricity Rate Schedules or any amended or replacement rate schedules, tariff regulation, order or such other enactment as approved by OUR from time to time.

6.3 Ownership and Offering For Sale Of Renewable Energy Attributes

The QE shall retain any and all rights to own and to sell any and all Environmental Attributes (e.g. carbon credit) associated with the energy generated from the QF.

7.0 Energy Payment

The OUR's "Declaration of Indicative Generation Avoided Costs" Document # Ele 2010/ELE2010009_DCL001 published December 2010, as such document may be amended or replaced, shall govern the energy price payable by JPS for energy supplied to the JPS Grid by the QE from the QF in accordance with this Contract. The energy price for any given Month shall be the short run avoided cost of generation to the JPS Grid which price shall be published by the OUR from time to time. Under this mechanism the price per kWh will change from month to month depending on the cost of fuel to the system and the net generation associated with the cost of fuel used for the month. The payment calculation shall be in accordance with Schedule 3.

7.1 Payment Obligation

7.1.1 Consistent with the terms hereof, the QE may sell to JPS and JPS may purchase from the QE electrical energy generated by the QF. The purchase and sale of electricity pursuant to this Contract shall be a Net Billing arrangement as stipulated by the OUR's Electricity Sector Guidelines; provided, however, that no such arrangement shall cause the QE to sell more than the QF's Gross System Output.

7.1.2 Payment Methodology

Within ten (10) Business Days after the reading of the QF's meter, JPS shall prepare and deliver to the QE a statement reflecting amounts owed to each Party by the other Party pursuant to this Contract. Such statement shall include calculations, in reasonable detail, of such amounts owed to the QE for energy payment and amounts owed to JPS. For clarification, this statement from JPS shall be a net payment or net billing statement, whichever is applicable, that consolidates amounts owing to the QE with amounts owing to JPS. Payment for amounts owed to JPS shall be made within fifteen (15) Business Days after the Statement Date. Net amounts owed to the QE will be credited to the next monthly statement. Any net amount owing to the QE shall be due bi-annually, that is on June 30 and December 31 in each year, and payment to the QE shall be made by JPS within fifteen (15) Business Days of these dates.

8.0 Interruption of Energy from QF

8.1 JPS may require the QE to interrupt the supply of As-Available Energy output to the JPS Grid as it deems necessary:

- (a) to construct, install, maintain, repair, replace, remove, investigate, or inspect any of its equipment or part of its system; or
- (b) because of emergencies, forced outages, force majeure, or compliance with prudent electrical practices.

8.2 As soon as reasonably practicable, JPS shall notify the QE of the possibility that interruption of As-Available Energy output from the QF to the JPS Grid may be required pursuant to Clause 8.1. JPS shall not be obligated to accept and pay for any energy output supplied from the QF to the JPS Grid during the period of such interruption.

8.3 The QE shall be deemed liable for any damage arising from its non-compliance with a requirement to interrupt supply pursuant to Clause 8.1.

8.4 Notwithstanding any other provision of this Contract, if at any time JPS reasonably determines that either (a) the QF may endanger JPS personnel, or (b) the continued operation of the QF may endanger the integrity of JPS' electric system, JPS shall have the right to disconnect the QF from JPS' electric system.

8.5 The QF shall be reconnected at such time that JPS is reasonably satisfied that the condition(s) referenced in (a) or (b) of Clause 8.1 are no longer applicable or the conditions referenced in (a) or (b) of Clause 8.4 above have been corrected.

9.0 Maintenance and Permits

QE shall:

- (a) Maintain the QF and Interconnection Facilities, except those equipment contained in the QF which are owned by JPS, in a safe and prudent manner and in conformance with all applicable laws, regulations and guidelines including, but not limited to, the Generation Code and the relevant JPS Standards;
- (b) Establish and keep updated maintenance records for the QF;
- (c) Obtain any governmental authorizations and permits necessary for the construction and operation of the QF and Interconnection Facilities.
- (d) Reimburse JPS for any losses, damages, claims, penalties or liability it incurs as a result of QE's failure to obtain or maintain any such governmental authorizations and permits necessary for the construction and operation of the QF.

10.0 Metering

10.1 Ownership of Metering Equipment

- 10.1.1 JPS shall provide and install revenue class demand and energy meters, having remote monitoring capability and import/export ("net billing") registering facility measured at the interconnecting point to the JPS Grid. The QE shall be responsible for paying JPS any differential cost for the replacement of any existing meter with the aforesaid meter, if such replacement is deemed necessary by JPS.
- 10.1.2 The installed revenue class demand and energy meter shall be a single, separate and exclusive meter for the QF and shall not be shared with any other QF or generation facility.
- 10.1.3 In addition to the revenue class demand and energy meter, the QE may at its option install, or make provision for the installation of a production meter at the generator for the purpose of monitoring the generating system profile and auditing as required. This meter is not part of the monthly meter reading and billing process and shall be owned and maintained by the QE. The cost of such metering shall be borne by the QE.
- 10.1.4 JPS shall own, operate and maintain the Metering System and read the revenue class demand and energy meter for the purposes of measurement and billing the QE.

10.1.5 For QEs, replacement of the revenue class demand and energy meters if and when required will be provided at the sole expense of the QE EXCEPT where such replacement is necessitated as a result of some defect in or damage to the meter caused by any act or negligence of JPS, its employees or agents.

10.1.6 All meters should be readily accessible to JPS personnel for meter reading and/or data retrieval.

10.2 Testing, Calibration and Inspection of Metering System

JPS shall have the right, upon giving no less than twenty-four (24) hours prior notice to the QE, to test, calibrate and inspect the revenue class demand and energy meter. The QE may request JPS or the Bureau of Standards Jamaica on five (5) days prior notice to test the revenue class demand and energy meter, such testing to be done in accordance with the existing meter testing protocol established by the OUR and the Bureau of Standards Jamaica.

10.3 Discrepancies

If the Metering System is found to be inaccurate by more than that stipulated in Clause 10.4.1 or to otherwise function improperly during the previous Month, then the correct amount of Energy Output for the actual period during which inaccurate measurements, if any, were made shall be determined as follows:

10.3.1 If the revenue class demand and energy meter is not within the acceptable limits of accuracy or is otherwise functioning improperly, then the QE and JPS shall jointly prepare an estimate of the correct reading on the basis of all available information and such guidelines as may have been agreed to between the QE and JPS at the time the reading was taken.

10.3.2 If JPS and the QE fail to agree upon an estimate for the correct reading, then the matter may be referred by either Party for determination by the OUR.

After the Energy Output is determined in accordance with either Clause 10.3.1 or 10.3.2 above, the difference between the previous payments owed by JPS or the QE, as the case may be, for the period of inaccuracy and the recalculated amount shall be offset against or added to the next payment owed to JPS or the QE, as the case may be, under this Contract, as appropriate. In no event, however, shall any such adjustments be made for any period prior to the date on which the Metering System was last tested and found to be accurate within the tolerance stipulated in Clause 10.4.1 and not otherwise functioning improperly.

10.4 Meter Accuracy and Sealing

10.4.1 The Metering System shall have sufficient accuracy so that any error resulting from such equipment shall not exceed $\pm 0.5\%$ of full scale rating.

10.4.2 The revenue class demand and energy meter and associated instrument transformer boxes shall be sealed by JPS, and seals shall not be broken by anyone except JPS personnel when the meter is to be inspected, tested or adjusted.

11.0 Interconnection Facility and Parallel Operation Arrangements

The QE shall abide by all the requirements and standards for the design and construction of Interconnection Facilities and for parallel operation of the QF, as outlined in Schedule 2.

12.0 Security Deposit

Prior to the Commercial Operation Date, the QE shall deliver to JPS a Security Deposit in an amount equal to the dollar value of three (3) Months electricity consumption of the QE at the premises upon which the QF is located. The QE's Security Deposit shall be maintained throughout the term and may be adjusted from time to time in accordance with the most current data applicable. Where the QE may already be obliged to maintain and is maintaining a security deposit in respect of JPS' standard terms and conditions for electricity supply to the premises upon which the QF is located such security deposit shall be applied to the Security Deposit contemplated by this clause 12.0.

12.1 Draws, Replenishment

JPS may draw upon the Security Deposit provided by the QE in order to recover any compensation for damages to which JPS is entitled under this Contract as a result of the occurrence of an Event of Default or pursuant to any other provisions of this Contract. In the event of such a drawdown then, except in the circumstance when this Contract otherwise terminates, the QE shall within twenty (20) Business Days replenish the Security Deposit to the full amounts required by Clause 12.0.

13.0 Events of Default

Notwithstanding the occurrence of any Force Majeure as described in Clause 18.0, each of the following shall constitute an Event of Default:

13.1 The QE changes or modifies the QF from that provided in Clause 2.0 with respect to its type, location, technology or fuel source, or makes a Material Modification, without the prior written approval of JPS. However, this shall cease to be an event of default if the QE within thirty (30) days of notice from JPS of this event of default obtains JPS's approval.

13.2 The QE fails to provide and/or replenish the Security Deposit in accordance with the provisions of this Contract, if applicable. However, this shall cease to be an event of default if the QE replenishes the Security Deposit within five (5) days of notice from JPS of this event of default.

13.3 The QE fails to comply with any of the provisions of Clause 11.0 within twenty

- (20) Business Days after receipt of written notification by the QE from JPS to so comply, or such longer period as JPS may approve.
- 13.4 Where the QE is non-residential, it ceases the conduct of active business, for a period of three (3) consecutive Months without prior consent of JPS. Such consent shall not be unreasonably withheld.
- 13.5 Proceedings under the bankruptcy law or insolvency laws shall be instituted by or for or against the QE or if a receiver shall be appointed for the QE or any of its assets or properties or if any part of the QE's assets shall be attached, levied upon, encumbered, pledged, seized or taken under any judicial process, and such proceedings shall not be vacated or fully stayed within thirty (30) days thereof; or if the QE shall make an assignment for the benefit of creditors, or admit in writing its inability to pay its debts as they become due.
- 13.6 The QF does not achieve Commercial Operation on or before twelve (12) Months from the Licence Date or eighteen (18) Months from the Contract Date..
- 13.7 The QE fails to deliver any energy from the QF to JPS for a period of twelve (12) consecutive Months at any time after the Commercial Operation Date without prior notice to JPS.
- 13.8 Any of the representations or warranties made by the QE in this Contract is false or misleading in any material respect as of the time made.
- 13.9 The QE sells or permits another person to sell, deliver or convey any part of the energy generated by the QF to any other third party or allows any person to enter into any contract or undertaking for the sale, delivery or conveyance thereof.
- 13.10 The QE fails to provide a copy of the applicable licences and permits provided by the relevant agencies prior to the Commercial Operation Date, authorizing generation of As-Available Energy to the JPS Grid.
- 13.11 There is evidence of any tampering or unauthorized alteration of the approved QF and its Interconnection Facilities.
- 13.12 The internal load of the QF is altered to a level significantly different from that stated in the QE's application such that it could be deemed a Material Modification.
- 13.13 The QE breaches any material provision of this Contract not specifically mentioned in this Clause 13.0 and fails to remedy such breach within twenty (20) Business Days of receipt of written notification from JPS of such breach, or such longer period as may be approved by JPS, where such breach is capable of remedy.

14.0 Disconnection of Service and Termination of Contract

14.1 Disconnection of Service

- 14.1.1 The failure of the QE to pay any amount payable in accordance with the terms of this Contract (including the terms of the prevailing Electricity Rate Schedule) may result in Disconnection of Service.
- 14.1.2 The QE shall be required to pay a reconnection fee according to the prevailing JPS reconnection rate in addition to the amounts outstanding to JPS before the net billing arrangement may be re-established.

14.2 Termination of Contract

- 14.2.1 Either Party may upon the giving of twenty (20) Business Days notice to the other Party, except in cases of emergency where no notice shall be required, terminate this Contract on the occurrence of any of the following:
- (a) The failure by the other Party to pay any amount payable in accordance with the terms of this Contract and such payment remains unpaid for two (2) consecutive Months;
 - (b) Any act, neglect or default of the other Party, its servants and/or agents affecting or likely to affect, in a material manner, the safety or efficiency of the other Party's system;
 - (c) Any other material breach of this Contract; or
 - (d) On the request of the other Party.
- 14.2.2 In the event of the sale of the premises on which the QF is situated, then this Contract will terminate upon that sale.
- 14.2.3 In the event that the JPS Licence expires prior to the expiration or termination of this Contract, and is not renewed or extended, then this Contract shall terminate as of the date of expiration of the JPS Licence.

14.3 Settlement of Obligations and Actions Following Termination

- 14.3.1 Following any termination of this Contract, the Parties shall mutually agree to a final settlement of all obligations under this Contract within sixty (60) Business Days from such termination date unless extended by mutual agreement between the Parties. After such settlement, any remaining Security Deposit posted by the QE that has not been drawn upon by JPS pursuant to its rights under this

Contract shall be returned to the QE. Any dispute between the Parties regarding such final settlement shall be resolved according to applicable procedures set forth in Clause 20.7

- 14.3.2 At the time of termination of this Contract for any reason the QE is required to immediately isolate the QF from JPS' distribution network.
- 14.3.3 Upon termination of this Contract, the QE may continue to accept supply from the JPS Grid under the JPS standard terms and conditions and in accordance with the prevailing Electricity Rate Schedule.

15.0 JPS's Rights in the Event of Default

- 15.1 Upon the occurrence of any of the Events of Default in Clause 13.0, JPS may, at its option:
 - 15.1.1 Immediately terminate this Contract, without penalty or further obligation, except as set forth in Clause 14.0, by written notice to the QE, and setoff against any payment(s) due from JPS to the QE, any monies otherwise due from the QE to JPS; and
 - 15.1.2 Exercise any other remedy(ies) which may be available to JPS at law or in equity.
- 15.2 Termination shall not affect the liability of either Party for obligations arising prior to such termination or for damages, if any, resulting from any breach of this Contract.

16.0 JPS and the QE shall each be responsible for its own facilities. JPS and the QE shall each be responsible for ensuring adequate safeguards for other JPS customers, JPS' and the QE's personnel and equipment, and for the protection of its own generating system.

16.1 Indemnification

Each Party (the "Indemnifying Party") agrees, to the extent permitted by applicable law, to indemnify, pay, defend, and hold harmless the other Party (the "Indemnified Party") and its officers, directors, employees, agents and contractors (hereinafter called respectively, "JPS Indemnified Parties" and "QE Indemnified Parties") from and against any and all actions, claims, demands, costs or expenses for loss, damage, or injury to persons or property of the Indemnified Party (or to third parties) directly caused by, arising out of, or resulting from:

- (a) Breach by the Indemnifying Party of its covenants, representations, and warranties or obligations hereunder;
- (b) Any act or omission by the Indemnifying Party or its contractors, agents, servants or employees in connection with the installation or operation of its facilities and equipment or the operation thereof in connection with the other Party's system;
- (c) Any defect in, failure of, or fault related to, the Indemnifying Party's generation or transmission system;
- (d) The negligence or wilful misconduct of the Indemnifying Party or its contractors, agents, servants or employees; or
- (e) Any other event or act that is the result of, or proximately caused by, the Indemnifying Party or its contractors, agents, servants or employees related to the Contract or the Parties' performance thereunder.

17.0 Insurance

17.1 The QE shall procure or cause to be procured and shall maintain throughout the entire Term of this Contract, the requisite insurance issued by an insurer duly licenced under the Insurance Act acceptable to JPS (such policy or policies, collectively, the "QE Insurance"). A certified copy of the certificate of insurance shall be delivered to JPS at least ten (10) Business Days prior to the start of any interconnection work. At a minimum, the QE Insurance shall contain (a) an endorsement providing coverage, including products liability/completed operations coverage for the term of this Contract, and (b) a broad form contractual liability endorsement covering liabilities (i) which might arise under, or in the performance or non-performance of, this Contract, or (ii) caused by operation of the QF or any of the QE's equipment or by the QE's failure to maintain the QF or the QE's equipment in satisfactory and safe operating condition. Without limiting the foregoing, the QE Insurance must be reasonably acceptable to JPS. Any premium assessment or deductible shall be for the account of the QE and not JPS.

17.2 The QE Insurance shall have a minimum limit of (a) JA \$1,000,000 dollars for each occurrence if QF is over ten (10) kW and less than or equal to one hundred (100) kW; and (b) JA \$350,000 dollars per occurrence if QF is ten (10) kW or less. Such general liability shall include coverage combined single limit, for bodily injury (including death) or property damage.

17.3 To the extent that the QE Insurance is on a "claims made" basis, the retroactive date of the policy(ies) shall be the Contract Date or such other date as may be agreed upon to protect the interests of the JPS Indemnified Parties and the QE. Furthermore, to the extent the QE Insurance is on a "claims occurring" basis, the QE's duty to provide insurance coverage shall survive the

termination of this Contract until the expiration of the maximum statutory period of limitations in Jamaica for actions based in contract or in tort. To the extent the QE Insurance is on an “occurrence” basis, such insurance shall be maintained in effect at all times by the QE during the term of this Contract.

17.4 The QE Insurance shall provide that it may not be cancelled or materially altered without at least twenty (20) Business Days’ written notice to JPS. The QE shall provide JPS with a copy of any material communication or notice related to the QE Insurance within ten (10) Business Days of the QE’s receipt or issuance thereof.

17.5 The QE shall be designated as the named insured and JPS shall be designated as an additional named insured under the QE Insurance. The QE Insurance shall be endorsed to be primary to any coverage maintained by JPS.

17.6 JPS shall have the right to inspect or obtain a copy of the original policy or policies of insurance.

18.0 Force Majeure

18.1 Neither Party shall be liable to the other Party for failure to perform any of its obligations under this Contract when performance is hindered or prevented due to Force Majeure as defined in Schedule 1 herein. In the event that a Party is unable to perform its obligations due to Force Majeure, that Party shall immediately notify the other Party of the reason for the failure to perform its obligations.

18.2 Except as otherwise provided in this Contract, each Party shall be excused from performance when its non-performance was caused, directly or indirectly by an event of Force Majeure.

18.3 The Party claiming Force Majeure shall use its best efforts to cure the cause(s) preventing its performance of this Contract; provided, however, the settlement of strikes, lockouts and other labour disputes shall be entirely within the discretion of the affected Party and such Party shall not be required to settle such strikes, lockouts or other labour disputes by acceding to demands which such Party deems to be unfavourable.

18.4 The QE agrees to be responsible for and pay the costs necessary to reactivate the QF and/or the interconnection with JPS's system if the same is (are) rendered inoperable due to actions of the QE, its agents, or Force Majeure events affecting the QE, the QF or the interconnection with JPS.

19.0 Representations, Warranties, and Covenants of QE

19.1 Qualifying Facility and Application – Representations and Warranties

The QE represents and warrants that:

- (a) The QF is fully and accurately described in the Application;
- (b) All information in the Application is true and correct;
- (c) The QF has been installed to the QE's satisfaction;
- (d) The QE has been given warranty information and an operation manual for the QF; and
- (e) The QE has been adequately instructed in the operation and maintenance of the QF.

19.2 QE Further Representations and Warranties

The QF represents and warrants that as of the Commercial Operation Date:

19.2.1 Organization, Standing and Qualification: Non-Residential QE Only

The QE is a non-residential entity duly organized and validly existing in good standing under the laws of _____ and has all necessary power and authority to carry on its business as presently conducted, to own or hold under lease its properties, and to enter into and perform its obligations under this Contract and all other related documents and agreements to which it is or shall be a party. The QE is duly qualified or licensed to do business in Jamaica and in all other jurisdictions wherein the nature of its business and operations or the character of the properties owned or leased by it makes such qualification or licensing necessary and where the failure to be so qualified or licensed would impair its ability to perform its obligations under this Contract or would result in a material liability to or would have a materially adverse effect on JPS.

19.2.2 Due Authorization, No Approvals, No Defaults

Non-Residential QE:

Each of the execution, delivery and performance by the QE of this Contract has been duly authorized by all necessary action on the part of the QE, does not require any approval, except as has been heretofore obtained, of the _____ [shareholders, partners, or others, as applicable] of the QE or any consent of or approval from any trustee, lessor or holder of any indebtedness or other obligation of the QE, except for such as have been duly obtained, and does not contravene or constitute a default under any law, the _____ [articles of incorporation, bylaws, or other as applicable] of the QE, or any agreement, judgment, injunction, order, decree or other instrument binding upon the QE, or does not subject the QF or any component part thereof to any lien other than as contemplated or permitted by this Contract.

Residential QE:

Each of the execution, delivery and performance by the QE of this Contract has been duly authorized by all necessary action on the part of the QE, does not require any consent of or approval from any trustee, lessor or holder of any indebtedness or other obligation of the QE, except for such as have been duly obtained, and does not contravene or constitute a default under any law, or any agreement, judgment, injunction, order, decree or other instrument binding upon the QE, or does not subject the QF or any component part thereof to any lien other than as contemplated or permitted by this Contract.

19.2.3 Compliance with Laws

The QE has knowledge of all laws and business practices that must be followed in performing its obligations under this Contract. The QE is in compliance with all laws, except to the extent that failure to comply therewith would not, in the aggregate, have a materially adverse effect on the QE or JPS.

19.2.4 Governmental Approvals

Except as expressly contemplated herein, neither the execution and delivery by the QE of this Contract, nor the consummation by the QE of any of the transactions contemplated by this Contract, requires the consent or approval of, the giving of notice to, the registration with, the recording or filing of any document with, or the taking of any other action with respect to governmental authority, except with respect to permits (a) which have already been obtained and are in full force and effect or (b) are not yet required (and with respect to which the QE has no reason to believe that the same will not be readily obtainable in the ordinary course of business upon due application therefore).

19.2.5 No Suits, Proceedings

There are no actions, suits, proceedings or investigations pending or, to the knowledge of the QE, threatened against it at law or in equity before any court or tribunal of Jamaica or any other jurisdiction which individually or in the aggregate could result in any materially adverse effect on the QE's business, properties, or assets or its condition, financial or otherwise, or in any impairment of its ability to perform its obligations under this Contract. The QE has no knowledge of a violation or default with respect to any law, which could result in any such materially adverse effect or impairment.

19.2.6 Environmental Matters

To the best of its knowledge after diligent inquiry, the QE knows of no (a) existing violations of any environmental laws at the QF including those governing hazardous materials or (b) pending, ongoing, or unresolved administrative or enforcement investigations, compliance orders, claims, demands, actions, or other litigation brought by governmental authorities or other third parties alleging violations of any environmental law or permit which would materially and adversely affect the operation of the QF as contemplated by this Contract.

20.0 General Provisions

20.1 Confidentiality

20.1.1 Neither Party nor their respective employees and agents shall, either during the term of this Contract or within five (5) years after the expiration of this Contract, disclose any proprietary or confidential information relating to the other Party, the energy supply arrangements between the Parties, this Contract or the other Party's business or operations without the prior written consent of the other Party, or unless required to do so by applicable law.

20.1.2 Both Parties agree that they shall not disclose to any third party any confidential information provided by the other Party including personal or business information without the prior express written consent of the other Party, or unless required to do so by applicable law. Neither Party will knowingly or wilfully use for its own benefit or for the benefit of any person not party to this Contract, information obtained from and about the other Party, except for any information, data or material which:

- (a) at the time of disclosure to the Receiving Party was already known or in the possession of the Receiving Party;
- (b) is independently developed by the Receiving Party;
- (c) is generally available to the public without any breach of this Contract.

20.1.3 It is further agreed that:

- (a) The Receiving Party and its Representatives shall use the Information solely for the purposes of the terms of this Contract and for no other purpose.
- (b) The Receiving Party shall be responsible for any breach of the terms of this Contract by any of its Representatives to whom Receiving Party disclosed Information.
- (c) The Receiving Party agrees that the Disclosing Party (or an affiliate, as applicable) is and shall remain the exclusive owner of the Information and all patent, copyright, trade secret, trademark and other intellectual property rights therein. No licence or conveyance of such rights to the Receiving Party is granted or implied under this Contract.
- (d) At any time upon the written request of the Disclosing Party, the Receiving Party shall promptly return to the Disclosing Party, or destroy, all Confidential Information in the possession of the Receiving Party or its Representatives without retaining any copies. In addition, the Receiving Party shall promptly destroy all Confidential Material in the possession of the Receiving Party or its

Representatives without retaining any copies. In lieu of destroying all Confidential Material, the Receiving Party shall be permitted to hold such Confidential Material subject to the confidentiality obligations and other obligations of this clause. Within ten (10) Business Days of such written request by the Disclosing Party, the Receiving Party shall confirm in writing by a duly authorized officer of the Receiving Party that (i) all Confidential Information has been returned or destroyed, as applicable, and (ii) all Confidential Material has been destroyed or is being held subject to the terms of this Contract.

- (e) As soon as the Receiving Party learns that it may or will be legally compelled to disclose Information (whether by interrogatories, subpoenas, civil investigative demands or otherwise) or is requested to disclose Information by a governmental authority or agency, the Receiving Party shall notify the Disclosing Party and keep the Disclosing Party well-informed of any developments with respect to that compulsion or request. When time is of the essence, the Receiving Party may provide notice or updates orally, but must follow these communications with written summaries. The Receiving Party will cooperate with the Disclosing Party to enable the Disclosing Party to obtain a protective order or other similar relief or to narrow the scope of such legal compulsion or request. If, in the opinion of its legal counsel and in the absence of a protective order or waiver, the Receiving Party is legally compelled to disclose Information, the Receiving Party will disclose only so much of the Information as, in the opinion of its legal counsel, is legally required. In any such event, the Receiving Party agrees to use good faith efforts to ensure that all Information that is so disclosed will be accorded confidential treatment.

For purposes of this clause:

“Disclosing Party” shall mean the Party disclosing Confidential Information to the other Party under this Contract.

“Receiving Party” shall mean the Party to whom Confidential Information is disclosed under this Contract.

“Confidential Information” shall mean all information (whether oral, written, electronic and in any format including, but not limited to, computer files, diskettes, voicemail and email) relating to either Party or its Representatives or the transaction contemplated by this Contract including business plans, customers, pricing, strategies, trade secrets, operations, finances, assets, technology, methodologies or any other information that may be directly or indirectly disclosed to the Receiving Party or its Representatives by the Disclosing Party or its Representatives in the course of the Parties’ discussions regarding the said transaction and disclosed after the date of this Contract.

“Confidential Material” shall mean all analyses, compilations, studies or other documents or records prepared by the Receiving Party or its Representatives to the extent such analyses, compilations, studies, documents or records contain or are generated from Confidential Information.

20.2 Permits

The QE hereby agrees to obtain and maintain any and all permits, certifications, licences, consents or approvals of any governmental authority, which the QE is required to obtain as a prerequisite to engaging in the activities specified in this Contract.

20.3 Assignment

Neither Party may assign and/or transfer this Contract to a third party without the prior written consent of the other Party.

20.4 Disclaimer

In executing this Contract, JPS does not, nor should it be construed, to extend its credit or financial support for benefit of any third parties lending money to or having other transactions with the QE.

20.5 Notification

Any notice, request or consent required or permitted to be given or made pursuant to this Contract shall be in writing. All such notices, requests or consents shall be deemed duly given when delivered in person, or sent by registered or certified mail, , electronic mail or by facsimile if followed immediately with a copy sent by registered or certified mail, to the individuals at the address designated below. The Parties designate the following individuals to be notified or to whom payment shall be sent until such time as either Party furnishes the other Party written instructions to contact another individual:

For the QE:

For JPS:

Notice will be deemed to be effective as follows:

- (a) in the case of personal delivery or registered mail, on delivery;
- (b) in the case of electronic mail, eight (8) hours following confirmed transmission;
- (c) in the case of telegrams, two (2) hours following confirmed transmission; and
- (d) in the case of facsimiles, two (2) hours following confirmed transmission

A Party may change its address for notice by giving the other Party notice of such change pursuant to this Clause, otherwise the last address on record shall be the address for notice of such Party.

20.6 Applicable Law

The rights and obligations of the Parties under or pursuant to this Contract shall be governed by and construed according to the laws of Jamaica.

20.7 Resolution of Disputes

20.7.1 Notice of Dispute

In the event that any dispute, controversy or claim arising out of or relating to this Contract or the breach, termination or validity of any term thereof should arise between the Parties (a “Dispute”), a Party may declare a Dispute by delivering to the other Party a written notice identifying the disputed issue. Notwithstanding however, the Parties shall use their best efforts to settle amicably all disputes arising out of or in connection with this Contract or the interpretation thereof.

20.7.2 Resolution by Parties

Upon receipt of a written notice claiming a Dispute, officers of both Parties shall meet at a mutually agreeable time and place within ten (10) Business Days after delivery of such notice and thereafter as often as they reasonably deem necessary, to exchange relevant information and to attempt to resolve the Dispute. In such meetings and exchanges, a Party shall have the right to designate as confidential any information that such Party offers. No confidential information exchanged in such meetings for the purpose of resolving a Dispute may be used by a Party in litigation against the other Party.

20.7.3 Resolution by Mediation

If the matter has not been resolved within twenty (20) Business Days of the disputing Party’s notice having been issued, or if the Parties fail to meet within ten (10) Business Days pursuant to Clause 20.7.2, either Party may submit the matter to mediation before a mediator appointed by the Dispute Resolution Foundation of Jamaica.

20.7.4 Resolution by Arbitration

If the Dispute has not been settled by mediation in accordance with Clause 20.7.3, then the Dispute shall be submitted to arbitration by either Party, before a single arbitrator appointed with the agreement of the Parties. Where the Parties fail to agree and appoint the arbitrator within fifteen (15) Business Days of the notification by one Party to the other that the matter be submitted to arbitration, then either Party may apply to the General Legal Council to appoint such arbitrator for the matter in dispute.

20.7.5 Arbitration Proceedings

In any arbitration proceeding hereunder:

- i. proceedings shall, unless otherwise agreed by the Parties, be held in Kingston or St. Andrew, Jamaica;
- ii. English Language shall be the official language for all purposes;
- iii. proceedings shall be governed by the Arbitration Act of Jamaica; and
- iv. the decision of the arbitrator shall be final and binding and shall be enforceable in any court of competent jurisdiction, and the Parties hereby waive any objections to or claims of immunity in respect of such enforcement.

20.8 Limitation of Liability

In no event shall either Party, or their respective parent corporation, officers, directors, employees, and agents be liable to the other Party in connection with this Contract for any incidental, indirect, consequential, exemplary or punitive damages, resulting from any claim or cause of action, whether brought in contract, tort (including, but not limited to, negligence or strict liability), or any other legal theory.

20.9 Severability

If any part of this Contract, for any reason, is declared invalid or unenforceable by a public authority of appropriate jurisdiction, then such decision shall not affect the validity of the remainder of the Contract, which remainder shall remain in force and effect as if this Contract had been executed without the invalid or unenforceable portion.

20.10 Complete Contract and Amendments

All previous communications or agreements between the Parties, whether verbal or written, with reference to the subject matter of this Contract are hereby abrogated. No amendment or modification to this Contract shall be binding unless it shall be set forth in writing and duly executed by both Parties. This Contract constitutes the entire agreement between the Parties.

20.11 Survival of Contract

Subject to the requirements of Clause 20.3, this Contract, as it may be amended from time to time, shall be binding upon, and inure to the benefit of, the Parties' respective successors-in-interest and legal representatives.

20.12 Record Retention

Both Parties shall maintain for a period of five (5) years from the date of termination of this Contract all records relating to the performance of its obligations hereunder.

20.13 No Waiver

No waiver of any of the terms and conditions of this Contract shall be effective unless in writing and signed by the Party against whom such waiver is sought to be enforced. Any waiver of the terms hereof shall be effective only in the specific instance and for the specific purpose given. The failure of a Party to insist, in any instance, on the strict performance of any of the terms and conditions hereof shall not be construed as a waiver of such Party's right in the future to insist on such strict performance.

IN WITNESS WHEREOF, the undersigned have executed this Contract this

_____ day of _____ 20__.

Signed for and on behalf of:
**JAMAICA PUBLIC SERVICE
COMPANY LIMITED**
By:

In the presence of:

Witness

Signed for and on behalf of:
[*name of QE*]
By:

In the presence of:

Witness

SCHEDULE 1

Definitions:

“As-Available Energy” means energy produced by the QF and sold by the QE on an hour by hour basis for which contractual commitments as to quantity, time or reliability of delivery are not required.

“Business Day” means any day in which businesses are normally open to the public in Jamaica except Saturdays, Sundays and Public Holidays.

“Commercial Operation Date (COD)” means the date that JPS provides written notification to QE, pursuant to Clause 5.2, of JPS’s declaration that all of the conditions specified in Clause 5.0 and Schedule 2 have occurred or are otherwise satisfied.

“Contract” means this Standard Offer Contract including all Schedules, Exhibits and reference documents thereto, as amended or supplemented from time to time.

“Contract Date” means the date on which the QE and JPS sign this Contract as indicated at the beginning and in Clause 4.0 of this Contract.

“Disconnection of Service” means the discontinuation of electricity supply by JPS to the QE and the discontinuation of the purchase of energy from the QE.

“Distribution Network Code” means a code issued by JPS and approved by the OUR that prescribes the requirements for all users of the JPS distribution network.

“Distribution Upgrades” means a required addition or modification to JPS’s electric distribution system at or up to the point of interconnection to accommodate the interconnection of a QF. Distribution upgrades do not include interconnection facilities.

“Electricity Rate Schedule” means the schedule of rates to be charged as allowed under the Amended and Restated All-Island Electric Licence 2011 and as approved by the OUR annually and amended from time to time.

“Electricity Sector Guidelines” means the Guidelines for the Addition of Generating Capacity to the Public Electricity Supply System – Ele 2005/08.1 published by OUR and as might be amended from time to time.

“Environmental Attributes” means any and all current or future credits, benefits, emissions reductions, environmental air credits, emission reduction credits, offsets and allowances, however entitled, resulting from the avoidance of the emission of any gas, chemical or other substance attributable to the QF during the Term, or otherwise attributable to the generation, purchase, sale or use of energy from or by the QF during the Term, including without limitation any of the same arising out of legislation or regulation concerned with oxides of nitrogen, sulfur or carbon, with particulate matter, soot or mercury, or implementing the United Nations Framework Convention on Climate Change

(the UNFCCC) or the Kyoto Protocol to the UNFCCC as may be amended or replaced from time to time.

“Force Majeure” means any event or circumstances or combination of events or circumstances beyond the reasonable control of a Party which materially and adversely affects the performance by that Party of its obligations or the enjoyment by that Party of its rights under or pursuant to this Contract and includes acts of nature, epidemic or plague, acts of war, invasion, armed conflict or act of foreign enemy, blockade, embargo, revolution, riot, insurrection, civil commotion, acts of terrorism, strikes, work to rule and go slows.

“Generation Code” means the guiding principles, operating procedures and technical standards governing the operation of the Jamaican power system grid and all interconnected generating facilities, as from time to time revised with the approval of the OUR.

“Government Electrical Inspector” means the relevant person within the responsible Ministry of the Government of Jamaica responsible for inspecting and certifying all electrical installations within Jamaica before energisation in accordance with the Electric Lighting Act.

“Grid Conditions” means any issue or condition that impacts on JPS’s ability to accept power from an entity or facility. This includes any capacity cap for the applicable feeder; safety of the local distribution system; the requirement for planned or unplanned maintenance etc.

“IEEE Standard 1547” means the Institute of Electrical and Electronics Engineers, Inc. (IEEE), 3 Park Avenue, New York, NY 10016-5997 (2003): *“Standard for Interconnecting Distributed Resources with Electric Power Systems”*

“Interconnection” means the physical connection of a QF to JPS’s distribution system so that parallel operation can occur.

“Interconnection Facilities” means the facilities including equipment stipulated by JPS to accommodate the Interconnection of a QF. Collectively, Interconnection Facilities include all facilities, and equipment between the QF and the point of interconnection, including modification, additions or upgrades that are necessary to physically and electrically interconnect the QF to the JPS electric distribution system. Interconnection facilities are sole use facilities for the particular QF and do not include distribution upgrades.

“Interconnection Guidelines” means the technical interconnection requirement document provided by JPS which outlines the procedures and important parameters to be considered when installing or modifying a QF to the JPS Grid.

“Intermittent Renewable Energy” means energy from renewable sources, such as wind, solar (etc) which is uncontrollably variable, unlike energy from conventional generation sources.

“JPS Grid” means JPS’s transmission and distribution network.

“JPS Licence” means JPS’ Amended and Restated All-Island Electric Licence, 2011, as may

be amended or restated from time to time.

“JPS Standards” means JPS’ approval guidelines for planning and installing electric service.

“Licence Date” means the effective date of the QE’s licence to generate and supply electricity to the JPS Grid, which would have been obtained from the Minister with portfolio responsibility for energy or other authorizing body. This is the start of the twelve (12) Month period within which the QF should commence Commercial Operations of the QF as contemplated in Clauses 5.1(ii) and 13.6 of this Contract.

“Material Modifications” refers to any change in the status, specifications or information submitted by the QE regarding the QF at the time of original application, including but not limited to modifications of system size of the QF, ownership of the QF, system component design, system or component specification, applicable certifications or approval of the QF by relevant authorities or change in technology.

“Metering System” means all meters and metering devices owned by JPS and used to measure the delivery and receipt of Energy Output.

“Month” means a calendar month according to the Gregorian Calendar, beginning at 12 midnight on the last day of the preceding month and ending at 12 midnight on the last day of that month.

“Monthly Billing Period” means the period beginning on the first calendar day of each calendar month, except that the initial Monthly Billing Period shall consist of the period beginning 12:01 a.m. on the Commercial Operation Date and ending with the last calendar day of such month.

“Net Billing” is as outlined in the Electricity Sector Guidelines.

“Energy Output” means the energy delivered by the QF or received by the QF from JPS at the Point of Interconnection as measured in accordance with the terms of this Contract.

“Gross System Output” means the maximum electrical output of the QF; this output rating of the QF being related to the major electrical device e.g. inverter, with the highest electrical rating that limits the maximum output of the system. This information would have been provided in the Application form.

“Non-Residential Entity” refers to a QE which is a company or other business entity whose QF has a nameplate capacity of less than or equal to 100kW.

“Parties” collectively refers to JPS and the QE.

“Parallel Operation” means the state and operation where the QF is connected to the distribution network and supplying loads along with the electric grid.

“Point of Interconnection” means the point where JPS’ distribution system is electrically

connected to the QF's electrical system. That is the physical point where the electrical conductors of the distribution system are connected to the QF's conductors and where any transfer of electric power between the QF and the distribution system takes place. Point of Interconnection has the same meaning as the term "point of common coupling" in IEEE Standard 1547.

"Project Consent" means consents, approvals, permits, licences and authorizations required by all governmental and local agencies, commissions and authorities with jurisdiction over the QE which are necessary for the QE to obtain and maintain in order to enable it to perform its obligations under this Contract.

"Public Holiday" refers to a day or days in Jamaica which are legally designated as days of national observance upon which businesses are not required to be operated, public offices are closed and legal process may not be served and includes such days as are listed in the Schedule to the Holidays (Public General) Act.

"Short Run Avoided Cost Rate" means the energy price per kWh approved by the Office of Utilities Regulation from time to time, that JPS shall pay the QE for Energy Output delivered to the JPS Grid.

"Qualifying Entity" or "QE" means a residential or non-residential entity which is the legal owner of the QF.

"Qualifying Facility" or "QF" means an approved intermittent renewable energy system with nameplate capacity less than or equal to 100kW. It may comprise an electric generator, prime mover, PV equipment and the interconnection equipment required to safely interconnect with the electric distribution system or a local electric power system.

"Required Commercial Operation Date" means the final date by which the QF is required to be commissioned and shall be exactly eighteen (18) Months after the Contract Date.

"Residential Entity" refers to a QE who is an individual whose QF has a nameplate capacity of less than or equal to 10kW.

"Security Deposit" shall have the meaning as set out in Clause 12.0.

SCHEDULE 2

INTERCONNECTION AND PARALLEL OPERATION ARRANGEMENT FOR THE PURCHASE OF AS-AVAILABLE ENERGY FROM INTERMITTENT RENEWABLE FACILITIES OF UP TO 100 kW

1.0 Scope and Purpose of the Interconnection Facility

1.1 This Schedule describes the conditions under which JPS and the QE agree that the QF described in Exhibit B shall be interconnected to and operated in parallel with JPS' distribution network. Other services that the QF may require from JPS will be covered under separate agreements.

1.2 The following exhibits are specifically incorporated into and made a part of this Schedule:

Exhibit A: Submitted Application Form to supply electrical energy to JPS

Exhibit B: Description of Qualifying Facility (A description of the QF, including a summary of its significant components and a diagram showing the general arrangement of Interconnection)

Exhibit C: Technical Definitions

Exhibit D: Description of Interconnection Facility

2.0 Conditions

2.1 The QE agrees that the following events must occur before the QF will be permitted to be energized and operate in parallel with the JPS Grid:

(a) The QE has agreed to the terms of this interconnection and parallel operation arrangement with JPS.

(b) The QF is commissioned as per Clause 6.0 of this Schedule, and the interconnection between the QF and JPS' distribution network is fully tested, to the reasonable satisfaction of JPS and the QE. JPS acknowledges that the testing procedure may require temporary interconnection of the QF to JPS' distribution network.

3.0 Interconnection Facility and Distribution Upgrades

3.1 Interconnection Facility

- 3.1.1 JPS shall determine the Point of Interconnection on the distribution network for the QF. The QE shall identify the additional interconnection facilities necessary to interconnect the QF to JPS' distribution network that is to be itemized in Exhibit D.
- 3.1.2 The QE is responsible for the design, installation, operation, maintenance and ownership of the interconnection facilities.
- 3.1.3 The QE shall be responsible for the cost of the interconnection facilities from the QF to the Point of Interconnection.
- 3.1.4 The QE shall provide interconnection facilities that adequately protect JPS' distribution system, personnel and other persons from damage and injury, which may be caused by the QF.
- 3.1.5 The QE shall be responsible for its expenses, including overheads associated with owning, operating, maintaining, repairing, and replacing its interconnection equipment.

3.2 Distribution Upgrades

- 3.2.1 JPS shall design, procure, install, and own any distribution upgrades required to accommodate the QF up to the Point of Interconnection.
- 3.2.2 The actual cost of the distribution upgrades, including overheads, shall be the responsibility of the QE. The methodology for the calculation of such costs shall be in accordance with JPS' current line extension policy.

4.0 Responsibilities of JPS and QE

- 4.1 Each Party shall at its own cost and expense, operate, maintain, repair and inspect and shall be fully responsible for, the facility or facilities, which it now or hereafter may own or lease.
- 4.2 Maintenance of the QF and interconnection facilities shall at a minimum be performed in accordance with the applicable manufacturer's recommended maintenance schedule.
- 4.3 JPS and the QE shall each be responsible for the safe installation, maintenance, repair and condition of their respective lines and equipment on their respective sides of the Point of Interconnection.

5.0 Installation and Permitting

5.1 Standards

5.1.1 The QF must comply with all applicable National Electric Codes, Bureau of Standards and IEEE requirements for design, equipment specification and operation, including but not limited to:

- (a) IEEE Standard 1547 (2003): “*Standard for Interconnecting Distributed Resources with Electric Power Systems*”
- (b) JPS Interconnection Guidelines
- (c) Electric Utility Sector Generation Code
- (d) Distribution Code (as prepared by JPS and approved by the OUR)

5.2 Technology Specific Requirements

5.2.1 Different technologies may require unique designs for the operation of the generator. If the standards do not address the interconnection requirements for a particular generating facility or technology, JPS and the QE shall agree upon other requirements.

5.3 Permits

5.3.1 The QE must, at his own expense (a) obtain all necessary electrical permits for installation of the QF and (b) obtain and maintain any government authorizations or permits required for the operation of the QF.

5.3.2 The QE must reimburse JPS for any losses, damages, claims, penalties or liability JPS incurs as a result of the QE’s failure to obtain or maintain any government authorizations and permits required for construction and operation of the QF.

5.4 QF Construction

5.4.1 The QE or its contractor shall construct the QF as specified in the attached Exhibit B.

5.5 Interconnection Disconnect Switch

5.5.1 A manual, lockable, load break disconnect switch that provides a clear indication of the switch position must be available with the system (local load and QF) at or near the main point of service from JPS’ electric system hereafter called the Point of Interconnection to provide a point of electrical separation between the JPS distribution network and the system (load and QF). This disconnect switch shall be rated for the voltage and fault current requirements of the QF and shall meet all ANSI, NEMA, IEEE standards as well as local electrical codes.

- 5.5.2 JPS shall approve the location of the disconnect switch which shall be easily visible, mounted separately from the metering equipment, readily accessible to JPS personnel at all times, and shall be capable of being locked in the open position with JPS's lock. The disconnect switch shall be permanently labeled with text indicating that the switch is for the system (load and QF). The disconnect switch shall be located on the load side of the JPS Grid such that it can be isolated from the JPS distribution network.
- 5.5.3 JPS may open the disconnect switch thereby isolating the system (load and QF) from the JPS distribution network for any reason as specified in the Contract including, but not limited to, maintenance or emergency work, forced outages, the QF adversely affecting other customers of JPS, modification of the QF, failure of the QF to comply with codes/regulations, the QF creating hazardous or unsafe conditions and the QE's failure to pay electric utility bills due.

5.6 **Generator Disconnect Switch**

- 5.6.1 A generator disconnect switch shall be constructed which is capable of isolating the generator from both the QE's load and utility main supply. This switch shall be configured such that its opening does not affect QE from receiving electricity from JPS for its local consumption. This switch shall be opened and locked for certain reasons but not limited to (a) power quality issues, (b) interruption of supply from the QF in accordance with Clause 8.0, (c) termination of contract and (d) any other justifiable causes.

5.7 **Power Quality Requirements**

- 5.7.1 The QF shall not create power system disturbances that will breach JPS standards and power system parameters as outlined in the Generation Code and Distribution Code.
- 5.7.2 JPS reserves the right to install test equipment as may be required to perform a disturbance analysis and monitor the operation of the QF to evaluate the quality of the power produced. If the system is demonstrated to be a source of interference, and the interference breaches JPS standards, requirements under the Generation Code and Distribution Code or generally accepted industry standards, then the QF shall be isolated from the JPS distribution network either by using the generator or interconnection disconnect switch until corrections are made to remedy the interference.
- 5.7.3 It is the QE's responsibility to eliminate the interference caused by the QF.

6.0 QF Testing and Commissioning

- 6.1 The QE shall notify JPS in writing at least fifteen (15) Business Days before the QE's target date for interconnection of the QF with JPS' distribution network, that the installation of the QF is complete and that the interconnection equipment is available for inspection by JPS and any testing if deemed necessary
- 6.2 JPS shall inspect and may test as deemed necessary the QE Interconnection Facilities and notify the QE of any deficiencies within ten (10) Business Days after such inspection and/or test. QE must correct all deficiencies within ten (10) Business Days unless waived by JPS in writing prior to parallel operation of the QF.
- 6.3 JPS shall thereupon have the right to witness any testing of the QF.
- 6.4 Subsequent to (a) the completion of inspections and tests of the interconnection facilities and (b) the submission of commissioning documentation of the QF, JPS shall notify the QE that the QF is authorized to interconnect to the distribution network.

7.0 Prior Authorization

- 7.1 For the mutual protection of the QF and JPS facilities and workers, the connections between the QF service wires and JPS entrance conductors shall not be energized or re-energized without prior written authorization of JPS, which authorization shall not be unreasonably withheld.

8.0 Inspection

- 8.1 JPS may enter QE's premises (a) to inspect at all reasonable hours QE's protective devices and read or test meters and (b) to disconnect, without notice, the Interconnection Facilities if, in JPS' opinion, a hazardous condition exists and such immediate action is necessary to protect persons, or JPS' facilities, or property of others from damage or interference caused by QE's facilities, or lack of properly operating protective devices.

SCHEDULE 3

ENERGY PAYMENT CALCULATION AND CHARGES TO QE FOR THE PURCHASE OF AS-AVAILABLE ENERGY FROM INTERMITTENT RENEWABLE FACILITIES OF UP TO 100 kW.

The Energy Payment as expressed in Jamaican dollars for each Month commencing with the Commercial Operations Date, shall be computed as follows:

1. Energy Payments

$$EP_m = SAC_m \times (1 + \text{Premium}) \times EO_m$$

- EP_m = Energy Payment in Jamaican Dollars
- SAC_m = Short Run Avoided Cost Rate in price per kWh as calculated from month to month and will represent the system's total fuel cost for the month prior to that in which the energy is supplied divided by the net generation output for the similar period (that is, the month prior to that in which the energy is supplied).
- Premium = In order to encourage the development of renewable energy technology, the Government of Jamaica has determined that renewable plants will be allowed to sell electricity to JPS at a maximum of 15% above the avoided cost of energy. In this regard, the "Premium" in the above formula will be a maximum of 0.15.
- EO_m = Energy Output (kWh) delivered to JPS by the QF for Month_m
- m = The numeric representation of a Month

The short run avoided cost of generation will be calculated in the following manner:

$$SAC_m = F_m / \text{Gen}_m$$

Where:

- Billing Period = The billing month for which the short term avoided cost rate will be in effect as determined by the Office.
- SAC_m = Monthly avoided Fuel Cost in J\$ per kWh applicable to QF during the Billing Period

F_m = Total Applicable fuel cost for the month which ended prior to the first day of the Billing Period.

Total applicable fuel cost for the period is:

- a) The cost of fuel consumed in JPS and IPP generating units for the Billing Period.
- b) An amount to correct for the over-recovery or under-recovery of total reasonable and prudent fuel costs, such amount shall be determined as the difference between fuel costs billed, using estimated fuel costs and actual reasonable and prudent fuel costs incurred during the Billing Period.

Gen_m = The total production of electricity from JPS and IPP power plants net of station use for the month which ended prior to the first day of the Billing Period.

2. Charges to QE

DPC = Direct Program Costs in Jamaican Dollars, which is billed monthly for the cost of meter reading, billing and other appropriate administrative costs to be assessed and approved by the Office of Utilities Regulation on recommendation by JPS.

DPC = J\$315 for Residential and
DPC = J\$700 for Commercial¹

3. Net Monthly Payment to QE

$$NMP_m = MB_m - EP_m + DPC$$

NMP_m = Net amount in Jamaican Dollars payable by or to the QE after all payments and applicable charges are considered

MB_m = Month Electricity Billing in Jamaican Dollars for electricity purchased from JPS in accordance to the applicable Rate Schedule

¹ These amounts may be amended from time to time by JPS subject to OUR Approval.

SCHEDULE 4

RELEVANT OUR DOCUMENTS

Office of Utilities Regulation – Guideline for the Addition of Generating Capacity to the Public Electricity Supply System – June 2006 Doc# Ele 2005/08.1

Office of Utilities Regulation – Declaration of Indicative Generation Avoided Costs – June 2008 Doc# Ele 2008/06

Office of Utilities Regulation – Determination of the Electricity Indicative Generation Avoided Costs – July 23, 2008 Doc# Ele 2008/07 Rep/02

ANNEX C: Licence Application Form

**APPLICATION FOR LICENCE TO SUPPLY AS AVAILABLE INTERMITTENT ENERGY FROM
RENEWABLE ENERGY FACILITIES UP TO 100KW TO THE PUBLIC ELECTRICITY SYSTEM
AND
APPLICATION FOR INTERCONNECTION ARRANGEMENT WITH JPS**

SECTION A:

1. Name of Applicant:

() Individual () Company

2. Customer No. Premises No.

3. Existing Meter No.

4. Postal Address:

.....

.....

5. Telephone No.

6. Facsimile No.

7. Email Address:

8. Name and address of any person or organization acting on behalf of the Applicant

(Contact in Jamaica):

Name:

Address:

.....

.....

Telephone No:.....

Facsimile No:

E-mail address:



SECTION B: DESCRIPTION OF PROPOSED RENEWABLE ENERGY SYSTEM

System Type: Solar Wind
 Hydro Biomass

Electrical Configuration: 1-phase 3-wire 3-phase 4-wire

Facility Main Breaker Size: _____ Amps

System Capacity (kW): Nominal _____ Max _____

System: Manufacturer _____
 Model _____

Inverter Rating (kW): Nominal _____ Max _____

Inverter Electrical Output: Voltage _____ Frequency _____

Indicate the proposed annual energy sales to the electric grid in kilo-watt-hours (kWh) _____.

Discuss any particular characteristic of the facility which the electricity supplier believes might impact on the qualifying status and also give detailed description of the facility. (attach sheets if necessary)

SECTION C: DECLARATION OF APPLICANT

I/We declare that:

(Name of Applicant)

Individual/Company

(i) I am/We are not disqualified from being granted a licence by reason of any legal impediment.

I/We will secure the technical competence to fully perform the obligations imposed by the licence. I/We satisfy the financial requirements for the construction and operation of the facility or provision of service to which this application relates.

(ii) I am/We are a fit and proper person to be granted a licence,

(iii) All information submitted in favour of this application is true and correct. I/We understand that a recommendation for approval from the Office of Utilities Regulation in respect of this application would be based on information as declared herein. I/We understand that, if I/We knowingly make any false statement in this application, any licence granted pursuant to this application may be revoked.

(1) If individual sign below:

.....

Signature of Applicant

.....

Date

(2) If company sign below:

.....

Authorizing Officer

.....

Position/Title

.....

Date



ANNEX D: Application Process

Application Process:

Renewable Technology with Capacity less than 100 KW

STEP 1

Application for the addition of capacity in this category may be made by using a standard application form available on the OUR web site: www.our.org.jm and also JPS's customer service outlets Island wide,

The application form should be submitted in duplicate. One copy will be stamped by JPS for submission by the customer. This stamped copy, along with the application fee, should be submitted to the OUR.

STEP 2

The OUR confirms receipt of the application form to JPS.

STEP 3

JPS is required to respond to the applicant within two (2) months on receipt of the application indicating whether the application is accepted or rejected. If the application is rejected, JPS is required to state clearly the reason for the rejection. A copy of JPS communication to the customer must be simultaneously sent to the OUR.

STEP 4

If the application is accepted by JPS the prospective small power supplier will be required to sign a standard contract which is based on a predetermined price structured and a well defined interconnection arrangement. A standard licence will be issued by the Minister on recommendation of the Office before interconnection can be effected.

APPLICATION PROCEDURES FOR ADDITION OF NEW GENERATING CAPACITY TO THE PUBLIC ELECTRICITY SUPPLY SYSTEM

The Office of Utilities Regulation Act 1995 as amended (“the Act”) authorizes the Office of Utilities Regulation (the “Office”) to receive and process applications for licences and make recommendations to the portfolio Minister in relation to the application. These procedures set out the process by which the Office will solicit and process applications for licences to be issued for the addition of new Electricity Generating Capacity.

INITIATING THE LICENCING PROCESS

The Minister with portfolio responsibility for Energy, issues a directive pursuant to the Electric Lighting Act.

APPLICATION FORMS

Application forms and supporting documentation may be collected from:-

Office of Utilities Regulation
3rd Floor, PCJ Resource Centre,
36 Trafalgar Road
Kingston 10
Jamaica

or downloaded from the Office's website at www.our.org.jm, or by arrangement the Office will courier at applicant's cost.

COMPLETION AND SUBMISSION OF APPLICATIONS

All applications should be submitted in duplicate to JPS. JPS should give back to the applicant a stamped copy for submission to the OUR. The applicant submits to the OUR this stamped form along with the prescribed fees. A receipt evidencing delivery of application will be given for each application submitted to the OUR.

Receipts will be mailed by ordinary post to applicants who submit applications by registered post.

Applications are received by the OUR on a continuing basis.

All applications and supporting material should be submitted in English. Each application must state that it is being submitted pursuant to an Invitation. The Office reserves the right to request additional copies of applications and supporting documentation.

Additional information may be requested by the OUR or submitted by the applicant in respect of any application at any time before making its recommendations to the Minister.

Each application must be accompanied by a non-refundable application fee as prescribed by the Office from time to time. A separate fee is payable in respect of each application. This payment shall be made by cash, certified cheque or bank draft made payable to the Office of Utilities Regulation.

Applicants should note the disclosure requirements of the OUR Act 1995 as amended, and any Rules and Regulations made pursuant to this Act. The OUR strongly recommends that applicants rely on independent legal advice in preparing applications.

Applicants are required to notify the Office of any change to the information submitted with the application. Notification should be done within fifteen (15) working days after the deadline for submission of applications.

Applicants are required to meet all costs arising from (a) the preparation and submission of applications, (b) providing any additional information requested, and (c) the processing of each application including responding to public comments and attending at, and making submissions to the Office concerning these applications. The Office, the Ministry of Science, Technology, Energy and Mining (STEM) and the Government of Jamaica will not accept responsibility or liability for such costs, regardless of whether or not a licence is granted.

PROCESSING OF APPLICATIONS

All applications and supporting documentation become the property of the OUR upon submission. The OUR reserves the right to make public the names of corporate entities which have submitted applications as well as such information about the contents of the applications as it deems appropriate.

A technical evaluation of the Application is conducted by JPS to determine eligibility for the issuance of a licence. JPS has the right to conduct discussions with Applicants if necessary.

JPS should give reasons for denying the application to both the customer and the OUR.

RECOMMENDATIONS OF LICENCES

The Office shall prepare a report setting out its recommendation for acceptance or rejection of each application. This report is submitted to the Minister for his consideration. Copies of this Report will be made available to each Applicant upon request.

ISSUANCE OF LICENCES

Pursuant to the Act, the Minister may upon receipt of a recommendation from the Office, either grant the licence, refer the recommendation back to the Office for further consideration, or refuse to grant the licence and the Minister shall as soon as practicable give written reasons for the refusal.

Licences granted by the Minister are issued by personnel in the Minister's Office. The Office shall maintain a register of all applications for licences and all licences granted pursuant to the Act, in electronic form.

ANNEX E: Form of Licence

ELECTRIC LIGHTING ACT

LICENCE TO GENERATE AND SUPPLY POWER BELOW 100 KILOWATTS TO THE PUBLIC ELECTRICITY SYSTEM

Name of Licensee:

Address of Licensee:

is hereby granted a licence to supply electricity, subject to the provisions of the Electric Lighting Act, the Office of Utilities Regulation Act 1995 as amended, and any other applicable legislation, regulation, standard, licence (or any statutory modification, consolidation or re-enactment thereof after the date of the Licence) and to the terms and conditions herein specified.

Terms and Conditions of Licence

1.
.....
.....
.....

(Characteristics of supply)

Located at:

2.

(Purpose of supply)

3. This Licence shall be valid for a term of five (5) years.
4. The Licensee shall comply with the terms and conditions of connection with the Public Electricity Supply System.
5. The Licensee shall ensure that its installation is inspected and certified by the Government Electrical Inspectorate.
6. Where, during negotiations for the provision of interconnection there is any dispute between the interconnection provider and the interconnection seeker, either party may refer the dispute to the Office of Utilities Regulation for resolution.

7. This Licence shall become null and void if the Licensee breaches the terms and conditions of this Licence, operates unsafely, or shall not have within twelve (12) months, installed the necessary infrastructure required to comply with the terms of the Licence.

Dated this day of20 .

.....
[]
Minister of Science, Technology, Energy and Mining

