

# **Grid-Tied Solar Power System Proposal**

## For

Mr. firstname lastname

Date: 28<sup>th</sup> November, 2013.



28<sup>th</sup> November, 2013.

address

#### **Subject: Solar Power System for Residence**

Mr. firstname lastname,

After conducting a site inspection at your residence we were able to design a grid-tied solar power system that will provide, on average, 305 kWh of power a month.

Based upon the usable roof space at your residence and your current usage of electricity on a monthly basis, we would recommend installing a 3.00 Kw solar power system.

Please find attached an estimate to install a 3.00 Kw monocrystalline grid-tied solar power solution. We can provide you with an estimate for a polycrystalline system should you require it.

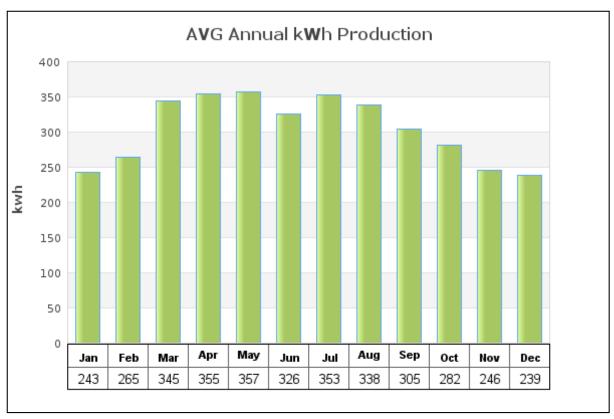
Please note that the system can accept more solar modules if you choose to increase the size of the solar array and consequently, your monthly electricity production.

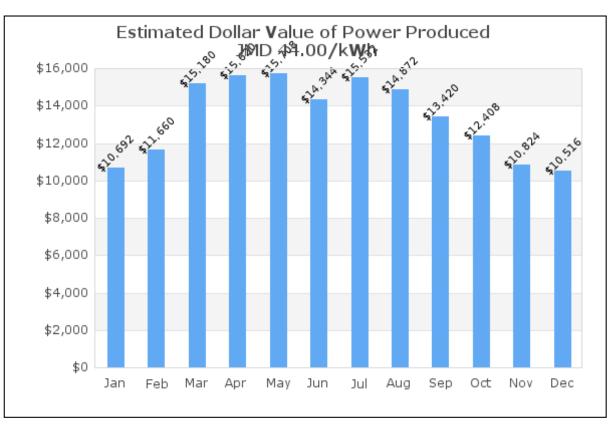
A solar array (multiple solar modules) will generate a certain amount of power for every month of the year given:

- Average solar radiation for the intended installation site for the year (Jamaica)
- Pitch of the roof or intended installation stand
- Bearing of the roof or intended installation stand
- Efficiency of the solar module and inverter being used

During our site inspection we gathered this necessary data and based on the aforementioned inputs we have arrived at the following annual electricity production figures (averages) for the 3.00 Kw installed on the usable section's of your roof:









Month	kWh Production	Estimated Dollar	Estimated Dollar
		Value of Power	Value of Power
		Produced @ JMD	Produced (USD)
		\$44.00/kWh	0.42/kWh
Jan	243	\$10,692	\$102
Feb	265	\$11,660	\$111
Mar	345	\$15,180	\$145
Apr	355	\$15,620	\$149
May	357	\$15,708	\$150
Jun	326	\$14,344	\$137
Jul	353	\$15,532	\$148
Aug	338	\$14,872	\$142
Sep	305	\$13,420	\$128
Oct	282	\$12,408	\$118
Nov	246	\$10,824	\$103
Dec	239	\$10,516	\$100
AVC	305	\$976	40

AVG	305	\$876	\$8
TOTAL	3654	\$160,776	\$1,535

Simple analysis that does not take into account inflation and assumes a constant kWh rate of JMD \$44.00

# **Pricing**

If you were to purchase the 3.00 Kw grid-tied solar power system using cash the total installed cost of the system would be USD \$\$20,000.00

If you were to make a 10% equity investment towards the system, NationGrowth Micro Finance could finance the system for a period of 5 years.

The monthly payment for the system would work out to be approximately JMD \$ (This figure represents a rough calculation and not a final figure).



# **ROI** Analysis

System Name Plate Capacity: 3.00Kw (3,000W)

Total Installed Cost of System (USD): \$20,000.00

# **Assumptions For Financial Analysis:**

Average Annual kWh Production Year 1: 3,654

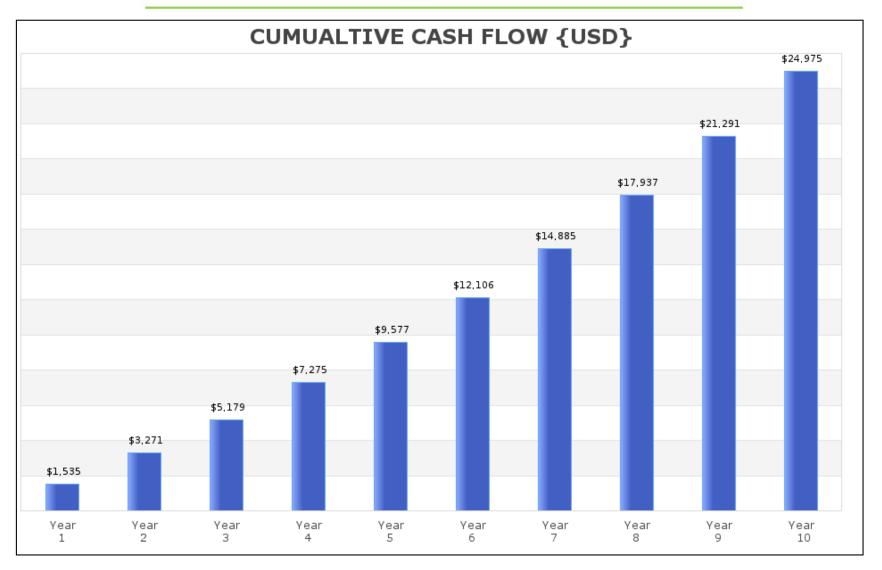
Average Annual kWh Rate 1 (USD): 0.42

Annual Increase in kWh Rate: 10.00%

Annual Inflation of Jamaica Dollar: 15.00%

Repayment on System (Years): 8.6





DIRECTORS: Aubyn Hill (Chairman), Ian K. Levy, Arnold Aiken, Ian Moore, Marguerite Cremin, Alexander Hill



#### **System Financing:**

IREE Solar understands the value in being able to finance the purchase of a system/s and spread the payment of the system/s over time. As such, we have formed meaningful working relationships with two financing partners in order to offer both a low interest renewable energy loan and a highly competitive lease financing option. IREE Solar will bridge the gap between you and either financing partner in order to ensure a hassle free experience should you choose to finance your system.

#### **Personal Renewable Energy Loan:**

-Max loan amount is JMD \$2,000,000.00
-Max loan tenure is currently 8 Years
-Interest rate will be 9.5% charged on the reducing balance
-There is a processing charge of 3% of the loan amount
-90% financing

\*Self employed individuals must be able to provide their last income tax return

#### **Requirements for Personal Renewable Energy Loan:**

1) Job Letter

2) Last Three (3) Pay Slips

3) Approved and Valid Identification

4) TRN

5) One (1) passport sized photograph

- 6) Quotation from IREE Solar for the purchase and installation of renewable energy equipment
- 7) Security Motor Vehicle, Equipment or Appliances (purchased), Assignment of Life Insurance Cash Value, Real Estate 8) Last Three (3) Utility Bills

## **Component Parts**

IREE Solar will take care of filing the standard offer contract (SOC) documentation necessary to be granted a license to interconnect to the national electricity grid in order to be able to sell any excess power your system generates back to the grid.





#### **Solar Modules/Panels:**

IREE Solar is committed to offering the highest quality products to our clients and as a direct result of this philosophy we utilize Suniva solar modules/panels. Suniva is an American manufacturer of high efficiency crystalline silicone photovoltaic solar cells and high power solar modules. Suniva cells are able to operate at conversion efficiencies of 19% (monocrystalline) which put them in a class of their own while still remaining affordable. All Suniva modules/panels are backed by a 10 year workmanship warranty and 25 year linear performance warranty ensuring high performance for the lifetime of the module/panel. All modules/panel frames are made from non-corrosive marine grade aluminium.

### **Racking & Hurricanes:**

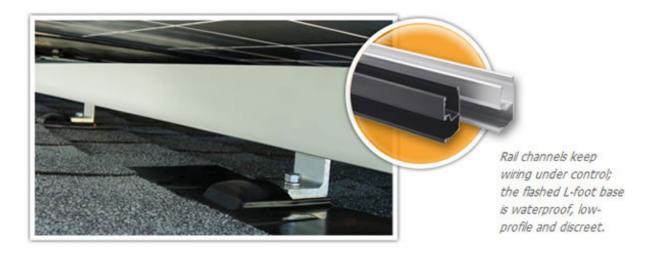
All our systems are installed using SnapNrack aluminium racking systems which guarantee that your solar panels are securely attached to your roof. This racking system is wind tested for severe wind speeds up to 150 mph. That being said, the beauty of the SnapNrack system is that it allows one to easily mount solar panels due to the easy to use clamps that hold the panels to the rails. This also means that it is very easy to remove the solar panels from the rails if necessary, all one needs to release the panels from the rail system is a socket set.





# SnapNrack Rail with L-Bracket Roof Attachment & Solar Panel Mid Clamp

Other racking systems are cumbersome and time consuming to operate which make taking down your panels in the case of a fast approaching hurricane a daunting and time consuming affair. Some installers actually drill holes into your solar panels to mount them to your roof which is not recommend as damage to the solar panels is quite likely to occur during the process and drilling holes into a solar panel's frame will normally void the warranty from the manufacturer.



Should you require any additional information or wish to view our demo system, please contact us and we would more than happy to assist you.

Please let us know if you require any additional information.



We	look	forward	to	vour	favoura	hle	response.
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Regards,

Alex Hill Managing Director