

Independent
Regulatory
Commission



January, 2022
Issue 1 - Volume 2

ENERGY FOCUS

A NEWSLETTER BY THE INDEPENDENT REGULATORY COMMISSION

LIGHTING OUR WAY AMIDST THE CHALLENGES

What's Inside:

Understanding your
DOMLEC Electricity Bill

Audit of DOMLEC's Fixed Assets

NEW Battery Energy Storage System

NEW IRC's Social Media Platforms

DON'T BE LEFT IN THE DARK

Understanding your DOMLEC Electricity Bill

Can you read your electricity bill?

Do you understand the items that are outlined on your bill?

The IRC is here to help.

Here is a guide to understanding your Electricity Bill

The present tariff that applies to domestic customers since 2007 is as follows:

DOMESTIC CUSTOMERS SOME FACTS YOU SHOULD KNOW

- (1) The first 50 kWh used is charged at \$0.578 per kWh. This is called Domestic Block 1 on the DOMLEC bill.
- (2) The second 50 kWh used is charged \$0.67 per kWh. This is called Domestic Block 2 on the DOMLEC bill. Any additional consumption above that second 50 kWh (i.e., above 100kWh) is also charged at \$0.67 per kWh.
- (3) Fuel Surcharge is charged on every kWh of electricity used. The fuel surcharge varies based on the price of fuel and the quantity of fuel used for generation of electricity during the month preceding the billing month. The calculation of the fuel surcharge is published monthly in the newspapers.
- (4) Value Added Tax (VAT) is only charged only on usage over 100 kWh.
- (5) Because of the two different rates for the first 50 kWh and the second 50 kWh, and because VAT is exempted from the first 100 kWh used by domestic customers, the bill must be calculated in parts in order to capture each of these aspects.

Customer Number	Account Number	Class	Bill Type	Service Address					
Commercial Regular Billing CANEFIELD									
Fuel Surcharge for January 2022= \$0.3839/kWh									
Directory Assistance: ENQUIRIES: Roseau - 255 6008/6009 P/mouth - 255 6051 BILL QUERIES:255 6004/6026/6023 CREDIT CONTROL: 255 6011/6005									
PAY-AS-U-GO: 255 6014/6118/6024 FAULT REPORTS: 255 6002/6003 EMERGENCY#811. WEBSITE: http://www.domlec.dm SIGN UP TO VIEW & PAY YOUR BILLS ONLINE VIA OUR CUSTOMER PORTAL: https://myaccount.domlec.dm									
TO AVOID DISCONNECTION, PLEASE PAY YOUR BILL BY THE DUE DATE.									
		Previous Read Date	Current Read Date	Total Days	Previous Reading	Current Reading	Usage	Units	Read Status
SRO		12/29/2021	01/27/2022	29	30274	30445	171	KWH	Regular
KVA		12/29/2021	01/27/2022	29	0	1	1		Consumption
		Transaction Date	Transaction Description		Amount				
		Dec 29, 2021	Previous Balance		\$ 258.38				
		Dec 31, 2021	Deposit Interest		\$ 5.00cr				
			Balance Forward:		\$ 253.38				
		Overdue Amount \$253.38. Subject to Disconnection.							
		Jan 27, 2022	Commercial Demand Charge		\$ 4.32				
		Jan 27, 2022	Commercial Block 1 Charge		\$ 121.92				
		Jan 27, 2022	Fuel Surcharge		\$ 65.65				
			Total:		\$ 191.89				
		Jan 27, 2022	VAT @ 15%		\$ 28.79				
			Summary of New Charges:		\$ 220.68				
			Total Due:		\$ 474.06				

Consumption History			
Date	Days	Units	Average
2022-01-27	29	171	5.90
2021-12-29	33	190	5.76
2021-11-26	30	168	5.60
2021-10-27	29	126	4.34
2021-09-28	32	184	5.75
2021-08-27	30	137	4.57
2021-07-28	30	250	8.33
2021-06-28	32	223	6.97
2021-05-27	29	238	8.21
2021-04-28	30	275	9.17

Customer Number	Account Number
Due Date	Amount Due
Feb 10, 2022	474.06

DON'T BE LEFT IN THE DARK

Understanding your DOMLEC Electricity Bill

EXAMPLE CALCULATION

Let us take the example of a Domestic customer of DOMLEC's who used 120 kilowatt hours (kWh) during the month of June 2021.

Note: 1 kWh is often referred to as 1 unit of electricity.

The example calculation below illustrates how the bill is calculated:

- a. The first 50 kWh used (**Block 1**): $50 \text{ kWh} \times \$0.578/\text{kWh} = \28.90
- b. The second 50 kWh used (**Block 2**): $50 \text{ kWh} \times \$0.67/\text{kWh} = \33.50
- c. Fuel surcharge must now be charge for the above first 100 kWh used. For the month of June 2021, the fuel surcharge applied was \$0.3811 per kWh.
 $-100 \text{ kWh} \times \$0.3811/\text{kWh} = \$38.11$

The above three charges are totaled on the bill:

That is: (Block1 + Block 2 + Fuel Surcharge) = $\$28.90 + \$33.50 + \$38.11 = \100.51

- d. The customer used 120 kWh for the month so now we calculate the *customer's* bill for the **additional 20 kWh** used by the customer over and above the first 100 units which are exempt from VAT. This additional amount of 20 kWh is now subject to VAT charge. The utility labels this section of the bill as **Additional kWh** and **Additional Fuel Surcharge**. Please see the example calculation below:
 - i. $20 \text{ kWh} \times \$0.67/\text{kWh} = \13.40 (charge for **Additional kWh** used over and above the first 100 kWh)
 - ii. $20 \text{ kWh} \times 0.3811 = 7.62$ (charge for fuel surcharge on kWh used over and above the first 100 kWh labelled **Additional Fuel Surcharge** on the bill)

Summary of charges for the additional 20 kWh so far: $\$13.40 + \$7.62 = \$21.02$

- iii. VAT must now be applied on the charge for the additional 20 kWh = $\$21.02 \times 0.15 = \3.15

The total bill for the month of June 2021:

Charges for usage below 100 kWh + Charges for usage above 100 kWh + VAT on usage above 100 kWh: = $\$100.51 + \$21.02 + \$3.15 = \124.68

GEOTHERMAL HIGHLIGHTS

The Independent Regulatory Commission continued in its interactions and dialogue with the Dominica Geothermal Development Company (DGDC) Limited. Information was shared and gathered on the status and timeline of projections with regards to various aspects of the development of a geothermal plant for Dominica.

In the past year, the Dominica Geothermal Development Company (DGDC) Ltd made significant progress in bringing the 10 MW geothermal power plant in Laudat to fruition. Achievements include:

Preparation for drilling of a reinjection well and a backup production well

- Acquired drill casings, well heads and drilling water supply materials
- Awarded a contract for an Owner's Engineer
- Awarded a contract for the construction of two well pads and access roads
- Conducted a procurement for Integrated Drilling Services; award pending
- Updated all environmental and social instruments (updated ESIA's can be found at <https://www.geodominica.dm/publications/>)

Preparation for a new Transmission Network

- Conducted a procurement for Environmental studies; award pending
- Conducted a procurement for Owners Engineer (including design) studies; award pending
- Supported the installation of a 5MW battery storage facility at Fond Cole

Power Plant Preparation

- Selected an EPC contractor
- Continued developing commercial and financing agreements with the project partners and development banks.

The focus for the next six months is on drilling of the two wells, environmental and design studies for the transmission network, and mobilization of the EPC contractor for the power plant construction.



BATTERY ENERGY STORAGE SYSTEM (BESS)

“The IRC initiated a study on the optimal dispatch for a Battery Energy Storage System (BESS) which will be commissioned near DOMLEC’s Fond Cole’ Thermal Generation Power Plant by the first quarter of 2022. The system is owned by the Dominica Geothermal Development Company (DGDC) Ltd and will be leased to DOMLEC for operation and maintenance.”

This BESS project forms part of the geothermal project and will primarily serve as spinning reserve in preserving the stability of DOMLEC’s distribution network in the event that one of the 5MW geothermal generators is forced off-line due to a catastrophic event or fault.

This BESS unit will be commissioned before the construction of the 10 MW geothermal plant at Laudat and consequently, the study of the battery system’s optimal dispatch regime must be known in order to derive the maximum benefit from it to DOMLEC’s customers.

The study considers three BESS operational scenarios in conjunction with the current generation mix:

1. No generation from geothermal and photovoltaic sources.
2. Generation from adding photovoltaic generation only; and
3. Generation from geothermal and photovoltaic sources.

This study started mid-October 2021 and will run for a three-month period. At the end of the study, DOMLEC as the System Operator, will be executing the dispatch regime appropriate for the circumstances that exist and that fits their prevailing operational constraints.

Other supplemental uses for this BESS unit includes (i) black start, (ii) peak shaving, (iii) frequency regulation, (iv) non-spinning, (v) supplemental reserves, and (vi) voltage support.

This BESS technology is the first-of-its-kind of utility scale battery storage to the national grid.

The components of this BESS are:

1. Switchboard
2. Automated Circuit Breaker
3. Bi-directional Inverter
4. Battery Storage Rack



Switchboard



Automated Circuit Breaker



Bi-directional Inverter



Battery Storage Rack





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IRC'S SOCIAL MEDIA PLATFORMS

The Commission has established social media platforms via the utilization of Facebook and LinkedIn. In September 2021, a marketing consultant, Mrs. Jillian LaRocque of Your Extra Hands was outsourced to work with the IRC. In addition to the creation and initial management of these social media platforms for the IRC, Mrs. LaRocque also provided training to the IRC's Consumer Affairs Officer, Corine Pinard, for the management and continued maintenance of the IRC's social media platforms.

It is the intention of the IRC to utilize these platforms to extend its reach to the public and all stakeholders by disseminating information on pertinent activities that are being undertaken in the execution of its mandate as provided by the Electricity Supply Act (ESA) 2006, No: 10 of 2006. The focus will also be on

educating the public on various decisions, rules, and regulations.

The IRC is looking forward to increasing public's knowledge and interest in its services and as such interactive participation from members of the public via these mediums will be useful.

AUDIT OF FIXED ASSETS AND AUDIT OF INVENTORY

A principal function of the Independent Regulatory Commission is to set electricity rates that are cost reflective, that will balance the interest of all stakeholders. As part of the procedures for setting tariff rates, the Commission is required to undertake, technical audit that includes examination of physical identifiable assets and financial audit that involves the examination of books, records, and accounts of the Dominica Electricity Services - DOMLEC. As a precursor to the upcoming tariff review, the IRC conducted two audits on DOMLEC:

- (1) Audit on DOMLEC's Fixed Asset as at the year ended December 2020, and
- (2) Audit of DOMLEC's Inventory for the period ended June 2021.

These audits form an integral part of the tariff review process. Assets or items not considered used and or useful during any tariff period shall be removed from the asset base hence reducing the rate base where applicable. Moreover, assets or items considered used and or useful shall be included in the rate base to reflect the true costs of providing service to rate payers and to balance the interest of both parties – consumers and service provider alike.

AUDIT OF DOMLEC's FIXED ASSETS (as at the year ended December 2020)

The audit of DOMLEC Fixed Assets spanned a 3-month period - March to May 2021.

A significant part of the audit procedures entails the examination and verification of the physical existence of a sample of fixed assets against DOMLEC's 2020 fixed assets register.

The audit team was made up of the Financial Analyst and the Utility Engineer of the IRC, accompanied by DOMLEC's personnel who assisted with the identification of the exact location of the assets both manually and with the use of Geographical Information System -GIS. They traversed the country to physically examine the existence and condition of the assets at all of DOMLEC's premises, that included Roseau, Fond Cole, Portsmouth, and the power stations in Trafalgar, Laudat,

Fond Cole, and Sugar Loaf.

Additionally, the team verified network assets such as electrical poles, transformers, capacitor banks and other accessories as well as high voltage (HV) and low voltage (LV) distributions lines on the North, East, South, West, and Central parts of the island.

AUDIT OF DOMLEC's INVENTORY- JUNE 2021 (for the period ended June 2021)

The audit of DOMLEC's inventory as of June 30, 2021, was undertaken during the months of July and August 2021. The audit assertions involved physical inventory count of a sample of slow and fast-moving high value generation and network spares at the various warehouses.

The audit also entails the following:

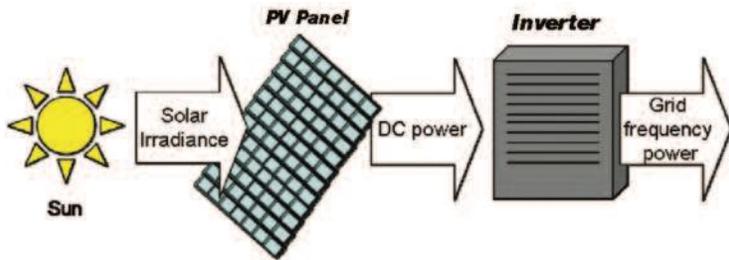
- (i) The examination of invoices for the procurement of fixed assets commissioned in 2020.
- (ii) The inventory of supplies purchased in 2021.
- (iii) The reconciliation of amounts against the relevant financial source documents to include general ledger listings, fixed assets register at December 2020 and Inventory Master listing at June 2021.
- (iv) A review of DOMLEC's accounting policies and procedures for the procurement of fixed assets and Stores Procedure Manual.



Utility Engineer Felix Julien (R) and Financial Analyst Connie Joseph-Louis standing alongside him.

KNOW YOUR DEFINITIONS

PV- Photovoltaic Generation – Converts energy from light spectrum directly into electrical energy



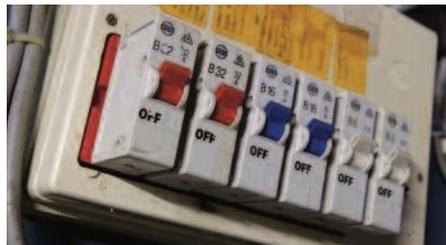
through the use of semi-conducting materials . It produces power in direct current (D/C). An inverter is used to connect the power system.

Inverter - An electric device that can be used to connect generators to the network. It outputs an alternating current(A/C) from a direct current (D/C) input, that is oscillating at a different frequency to the power system.



Surge- A sudden rise in voltage in a system, usually caused by load disconnect.

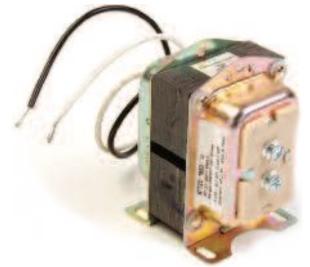
Circuit breaker – A protective device that automatically interrupts the current flowing through it when that current exceeds a certain value for a specified period of time.



Transfer Switch- an electrical device for switching loads between alternating power sources. An automatic transfer switch monitors the condition of the sources and connects the load to the alternate source if the preferred source fails.

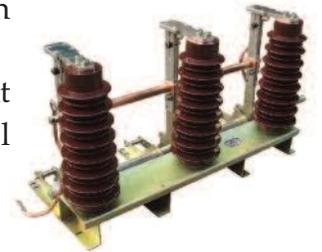


Transformers – Allow the voltage level of a network to be increased to transfer large amounts of power of long distance and then bring the voltage level back down to a level usable by consumers.



Step down transformers – reduces the voltage from one level to another

Earth switch – Allows the earthing of parts of a circuit as a safety precaution during maintenance . It protects against inadvertent enlivening of an electrical circuit during maintenance.



REVIEW ON THE INTERCONNECTION POLICY FOR DISTRIBUTED RENEWABLE ENERGY

The Distributed Renewable Energy Interconnection Policy sets the framework by which users of the national electricity grid can interconnect their renewable generation sources to the grid.

It had been recognized by a number of stakeholders in the sector that there was need to review and update the existing policy. Some of the concerns expressed were around the standards used for power quality monitoring, and the complexity of the process of interconnection for small systems. The IRC therefore launched a process of review of the policy. The aim is to address the issues brought

forward by the stake holders in the sector and members of the general public.

The review process began in May 2020 and is progressing smoothly. Members of the public who are interested in this process can view the existing policy on the IRC's website, (www.ircdominica.org).

STAFF PARTICIPATION IN VIRTUAL TRAINING

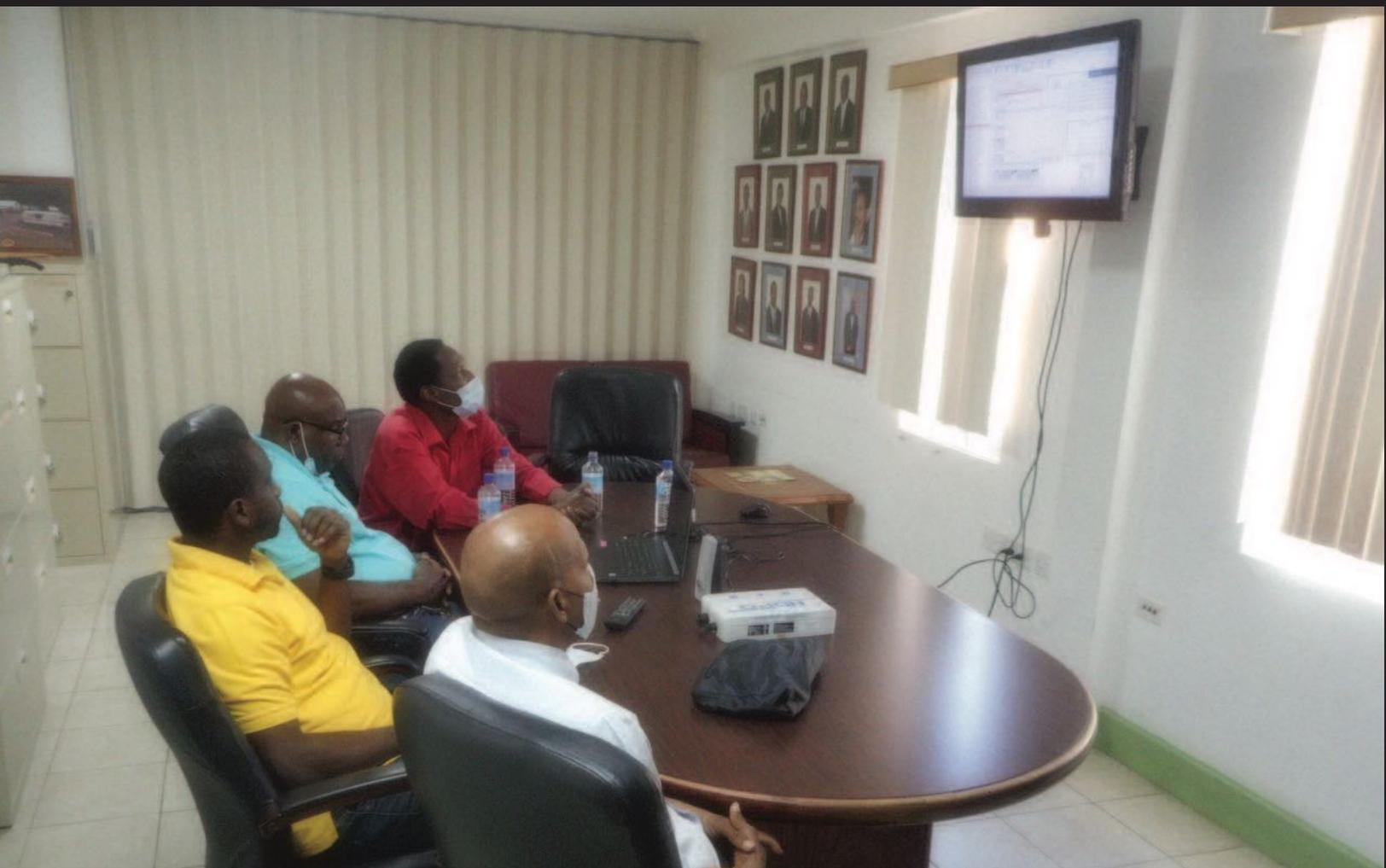
The Organization of American States (OAS) and the U.S. Department of Energy (DOE) under the Energy and Climate Partnership of the Americas (ECPA) program and the Caribbean Renewable Energy Forum (CREF), hosted two (2) virtual training series namely: Advancing Caribbean Energy Resilience (ACER) and Island Energy Transformation (IET). The series were held on February 9 and April 29, 2021, respectively. In attendance from the IRC were the Financial Analyst, Mrs. Connie Joseph-Louis and the Utility Engineer, Mr. Felix Julien.

The theme of these series were "Microgrids for Improving Energy Resilience" and "Understanding Utility Financial Viability Disruptors".

Participants received an overview of the designs and operations of microgrids in the context of increasing concerns over energy reliability and resilience during and after extreme events. Participants also obtained a deeper understanding of ratemaking as it pertains

to electric utilities and the factors that impact how utility rates are derived.

NEW POWER QUALITY METER TESTING EQUIPMENT FOR DISTRIBUTED RENEWABLE ENERGY (RE) SYSTEMS



Training in the use of Dranetz Power Quality Testing Meter and Dranview Software was undertaken by electricians and technical engineers from the Electrical Division and the technical staff of the IRC. The two-part training sessions took place on July 1st and October 22nd of 2021.

Efficient use of this equipment is critical, as the technical staff of the Electrical Division will be utilizing the same for testing and evaluating Distributed Renewable Energy (RE) Systems that require connection to DOMLEC's grid.

In the past DOMLEC was responsible for performing that function; however, the Commission has found it necessary to adopt a transparent approach since

the previous arrangement could pose conflict of interest and lacked prudence. The testing done by the Electrical Division would allow for an independent and impartial outcome.

The power quality (PQ) tests must comply with IEEE 519-2016 standard. This standard sets the limit for voltage and current distortion and associated harmonics.

The utilization of the Dranetz power quality testing meter began from November 1st, 2021 by the Electrical Division.



APPOINTMENT OF COMMISSIONERS

According to the Electricity Supply Act (ESA) 2006, No. 10 of 2006, the Board of the IRC shall consist of five (5) members, appointed by the Minister. Hence, on July 1st, 2021, a new Commissioner, Kareem Bertrand was appointed and joined the existing board, to complete its five-member body. Mr. Bertrand's initial appointment will run for a period of two years, ending June 30th, 2023.



Mr. Kareem Bertrand - Commissioner of the IRC

The IRC's Board of Commissioners has been re-appointed to serve a second term beginning July 1st, 2021, for a period of three (3) years. The members of the board being reappointed are: Chairman Marah Walter, Commissioners: Peter Bannis, Annette Severin-Lestrade and Kareem Guiste.



Dear Buddy

You won't see me at school today
I just don't feel too good
Can't even go outside to play
I'm just not in the mood.

My skin so warm
and my head hurts
I've asked my mom
"Could it get worst?"

Mom looked at me, made a sigh
Then really fast,
she shut her eye
opened it again, and asked

"Tell me son, are you in pain?"
"Mom." I said, "my throat is sore
I tried to eat but it's in vain
I've never felt like this before."

Mother said, My eyes look red,
and at my back, there is a rash
Oh Bud, I think I need some meds
things are happening all too fast.

My tummy to, it feels upset
Can't figure out what's wrong,
Could it be the chips I ate?
I just don't feel so strong.

It's two days now I've been in bed
With random chills, extreme fatigue
Questions racing through my head
Why is this happening!! I'm just a kid

Can't even taste the meal mom made
Although it looks so good
"Oh mom," I whispered, "I'm quite afraid
Can't even smell your food."

I haven't been out in the rain
Yet still I have a cough,
Mom said she thinks she can explain
and that she has seen enough.

She paced the floor and grabbed
the phone
Then headed to her room,
As if needing some time alone
she said, "I'll be back soon!!"

Just what it is we'll soon find out
You'll be the first to know,
Yes, we'll unearth, without a doubt
This sly sinister foe.

THE GENERATOR LICENCE PROCESS

A generator license is required for any generator set:

1. With a capacity rating of **20 kilowatts and over**
2. Directly interconnected to the National Grid; irrespective of capacity. For example, if the generator set is 10 kW, and if it is to be directly interconnected to the National Grid, then a license is required.

The process and other requirements:

- (i) The **generator application** must be filled out and submitted to the Commission. Forms can be obtained from the IRC's website.
- (ii) As part of the **licensing** process, the IRC also requires that a **Public Notice** for the license application be placed on **two** of the local print media; for example, The Chronicle and the Sun Newspaper. Note that Dominica-News-On-Line (D.N.O) could also be an additional option for publication for online consumption.

The notice should run for **two consecutive weeks** on each of the print and electronic Media. This would be necessary to make provisions for any comments / objections from the public regarding the installation.

Comments on application from the public must be made within **60 days** of the first publication.

Note that payment of the fees from the media houses for the publication will be met by the applicant.

- (iii) An Inspection of the installation, would also be required to be carried out by the Electrical Division, and a copy of the Inspection Certificate must be submitted to the IRC.

- (iv) Where there may be the need for any Power Purchase Agreements (PPAs) between the applicant and the utility company for direct interconnectivity to the grid, (this might be the case with a PV installation as well as persons wanting to sell back excess power to the utility), The utility company must be contacted from the onset.
- (v) A license **processing fee** of two hundred dollars (\$200.00) will be levied for processing a generator license document.



ARE YOU AWARE?



It is up to the customer to ensure that they get the service they deserve from their electricity provider.

The Commission has instituted Quality of Service Standards to ensure that consumers of electricity get the service they deserve. These comprise of Guaranteed Standards and Overall Standards.

Guaranteed Standards are a set of service standards which the utility (DOMLEC) must guarantee as a basic level of service to individual customers.

Overall Standards are a set of service standards which affects the electricity system generally, and consequently service/quality of electricity supplied to large group of customers will be affected.

A Guaranteed Standard is said to be breached, where DOMLEC has not met the service criteria for a given standard.

- **ARE YOU AWARE** that after the customer has settled overdue amounts, including reconnection fee, or has made an agreement on a payment schedule,

the reconnection of the consumer's service must be made **within 24 hours**, and that should the expiration of the 24 hour period fall on a Sunday or a Public Holiday, reconnection should be effected on the next business day? Are you aware that failure to do so on the part of the DOMLEC will result in an amount of \$12.00 automatically credited to your account if your connection is for domestic purposes and \$33.00 if it is for commercial purposes?

- **ARE YOU AWARE** that where it relates to emergency calls from individual customers, regarding burnt fuse, burnt service

connections, DOMLEC must respond and take corrective action within 4 hours of the time that the call is lodged? Failure on the part of DOMLEC will require the customer to file a claim at the office after which the customer will be entitled to a credit of \$12.00 if the connection is Domestic and \$33.00 if the connection is Commercial?

- **ARE YOU AWARE** that the service provider must mail your first bill within forty five (45) days after providing a new connection or establishing a new account – and that a **breach** on the part of the service provider, allows the **consumer to file in a claim** at the office of the service provider, after which, the customer will be entitled to a credit of \$12.00 if it is a Domestic connection and \$33.00 if it is for a Commercial connection?

COVID-19 VARIANTS

WORD SEARCH PUZZLE



ANTIBODIES
 CORONAVIRUS
 CROWN-LIKE
 DISAPPEAR
 DISTANCING
 DOCUMENTED
 EMERGE

EXPECTED
 HAND HYGIENE
 ISOLATION
 MASKS
 MITIGATION
 MUTATION
 PERSIST

PUBLIC HEALTH
 QUARANTINE
 SPREAD
 STRAIN
 VACCINATION
 VARIANTS
 VIRUS



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