

Kathleen Burgess  
Secretary  
New York State Public Service Commission  
State of New York  
3 Empire State Plaza  
Albany, NY12223

Re: Notice of Intent to sub-meter electricity at the building located at 37 Blue Slip, Brooklyn, New York 11222.

Dear Secretary Burgess,

BOP Greenpoint G LLC, is the owner of the above mentioned new rental building. The owner submits this notice of intent pursuant to 16 NYCRR § 96.2 to provide future sub-metering services for the building mentioned above which is located within the service territory of Consolidated Edison Company, Inc., 37 Blue Slip, Brooklyn, New York 11222.

Construction started May 2015 and completion is scheduled for December 2018. Total number of residential units is 359. All 359 Units will be Fair Market. There will be no low income or Section 8 units at this building. Currently none of the units are occupied. Initial occupancy date has not yet been determined.

The primary heat source for the property will be gas fired hot water condensing boilers and water source heat pumps in the apartments. Some apartments will have supplemental electric baseboard heaters and some apartments will have electric radiant floor heat in the bathrooms. The building management system will allow monitoring and analysis of common building energy usage of major HVAC equipment.

Some apartments will have baseboard electric resistance heaters at perimeter locations. They will have integral thermostats allowing occupant adjustments. Some apartment bathrooms will have electric radiant floor heat. The radiant heat will have wall mounted programmable thermostats.

The building façade and windows have high thermal and solar performance. Condensing type boilers and domestic water heaters are used for heating. Pumps and cooling tower fans have VFDs allowing turn down at part load conditions. Corridor air handling units have enthalpy energy recovery wheels.

The following appliances will all be energy star rated: Refrigerators, dishwashers and microwaves.

In addition, the Owner's sub-metering plan satisfies the requirements of 16 NYCRR § 96.2. Accordingly, the Owner respectfully requests the Commission to approve this Notice of Intent.

Economic advantages of sub-metering over direct utility metering:

The sub-metering system to be installed in the Buildings will include remote reading capabilities utilizing Power Line Carrier. This communication will allow a more cost-effective sub-metering system due to the elimination of control wiring. Each of the meters will communicate daily over the existing power lines in the Building using a data collection device referred to as a Scan Transponder. The data that is sent will include the hourly usage of electricity for each apartment.

The QuadLogic sub-metering system has an advantage in that; it includes fair energy cost allocation based on actual resident consumption. The QuadLogic system also includes daily data availability for usage and the convenience of a remote reading system, which makes entry to the private residences and inconveniencing the tenants not required for meter reading.

Description of the sub-metering system to be installed:

Quadlogic Control Corporation's MC5N (PSC Approved) meters measure usage in kilowatt-hours, VARs, VAs, Watts, Amps, and Power Factor. Other features of this meter include a non-volatile memory and an easy to read LCD 6-digit display. Additionally, the meter monitors and stores an apartment's hourly electric usage and retains this information for approximately 60 days. The submetering system meets ANSI C12.1 and C12.16 American National Standards Institute Code for Electricity Metering. Remote reading capability is possible through the use of Quadlogic Controls Power Line Carrier system, which is installed in more than 60,000 apartment units in the New York Metropolitan area. The system also features sophisticated self-diagnostics to ensure reliable operations. It can also be upgraded to provide advanced data.

Method to be used to calculate rates to tenants:

The average rate calculation is derived by taking the total dollar cost charged to the building by Consolidated Edison (Con Edison) (and ESCO if applicable) and dividing it by the total electric usage (kWh) of the building for a specific period. The cost per kWh is then multiplied by the tenant's actual consumption plus sales tax to derive total electric cost.

The following is an example of the formula that will be used to derive a tenant's electricity charges based on Average rate and a monthly usage of 250 kWh:

		<b>Total</b>
Total building's cost: Con Edison (and ESCO if applicable)	\$AA.AA	
Total building kWh	BBBB	
Rate	\$AA.AA / BBBB	\$CC.CC
kWh (Tenant)	250 times \$CC.CC	\$YY.YY
Sales Tax	YY.YY times .045000	\$ T.TT
	YY.YY plus T.TT	\$ZZ.ZZ
<b>Tenant Cost</b>		<b>\$ZZ.ZZ</b>

In no event will the total monthly rates (including any monthly administrative charge) exceed the utility's tariff residential rate for direct metered service to such residents (see 16 NYCRR § 96.2)

All Con Edison rates by classification are available on its website ([www.coned.com](http://www.coned.com)) under Rates and Tariffs. The electric Rates and Tariffs are listed under the heading "PSC No. 10" – Electric: Full Service.

QuadLogic Controls Corp. as the Building's electric billing company will read the meters monthly and process a bill based on the actual consumption of each tenant. The meter reading data and billing calculations will be documented and maintained for six (6) years, per the requirements set forth in 16 NYCRR §96.

Complaint procedures and tenant protection:

When a tenant has a question about electric bill or believes the electric bill is inaccurate, the following protocol will be followed: (the building is currently not occupied)

Tenant should submit the complaint to the property manager of the Building, including the action or relief requested and/or the reason for a complaint about a submetering charge. The property manager shall investigate and respond to the complaint in writing within 15 days of the receipt of the complaint. **The Property Management is located at 250 Vesey Street, 15<sup>th</sup> floor New York, NY 10128. The Property Manager; Linda Early can be reached at 212-978-1699 and email address [linda.early@brookfield.com](mailto:linda.early@brookfield.com).** If the tenant and the property manager cannot reach an equitable agreement and tenant continues to believe the complaint has not been adequately addressed, then the tenant may file a complaint with the Public Service Commission through the Department of Public Service. Alternatively, tenants may contact the Department of Public Service at any time concerning submetered service in writing at New York State Department of Public Service, 3 Empire State Plaza, Albany, New York 12223, by telephone at 1-800-342-3377, in person at the nearest office at 90 Church Street, New York, New York 10007, or via the Internet at [www.dps.ny.gov](http://www.dps.ny.gov)

Electric bills from Quadlogic to tenants will contain, among other things, opening and closing meter reads and dates, usage during a current period, a breakdown of dollar amounts billed, sales tax, the total charge for the period, and the total amount due (see attached sample Quadlogic electric bill).

In the event of non-payment of electric charges, the Owner shall afford the tenant's all notices and protections available to such tenant's pursuant to the Home Energy Fair Practices Act ("HEFPA") before any action(s) based on such non-payment, including termination of service, is commenced (see attached HEFPA documents for the Building).

Procedure for notifying tenants and Con-Edison of the proposal to sub-meter; lease riders; test billing:

A section in the lease rider will notify each tenant that their unit is sub-metered for electricity. (the submetering lease rider will be added as an addendum to the building's lease rider) The provision will in plain language clearly enumerate the grievance procedures for the tenant and will specify the rate calculation, rate caps, complaint procedures, and tenant protections and enforcement mechanisms and such provisions will be in compliance with the Home Energy Fair Practices Act. Con Edison will be notified at the time this petition is filed with the Public Service Commission under separate cover ( see attached letter to Con Edison)

Enforcement mechanism is available to tenants:

The complaint procedure constitutes the tenant's standard enforcement program, which are in compliance with the Home Energy Fair Practices Act

Certification that the lease language shall be sufficient to describe all relevant information to the tenant:

The Owner will certify that the method of rate calculation, rate cap, complaint procedures, tenant protections, and enforcement mechanism will be incorporated in all lease language plan agreements for sub-metering (see attached submetering lease rider).

Statement on sub-metering system capability to individually terminate electricity from each unit:

The submetering system allows for the termination of submetered electric service to a particular unit consistent with the requirements of HEFPA.

Installation of the sub-metering system:

The submetering system has not been installed as yet.

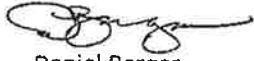
**Brookfield**

Brookfield Place  
250 Vesey Street, 15<sup>th</sup> Floor  
New York, NY 10281-1023

Tel (212) 417-7000  
[www.brookfield.com](http://www.brookfield.com)

Thank you for your attention to this matter.

Sincerely,

A handwritten signature in black ink, appearing to read 'Daniel Berger', with a stylized flourish extending to the right.

Daniel Berger  
BOP Greenpoint G LLC

Mr. David DeSanti  
General Manager  
Central Energy Services  
Consolidated Edison Company of New York, Inc.  
4 Irving Place  
New York, NY 10003

Re: Petition to sub-meter electricity at the building located at 37 Blue Slip, Brooklyn, New York 11222.

Dear Mr. DeSanti,

BOP Greenpoint G LLC, submitted to the New York State Public Service Commission a petition for an order to sub-meter electricity at the above-referenced property, which is located within the service territory of Consolidated Edison Company, Inc.

Thank you,

Sincerely,



Daniel Berger  
Senior Vice President  
BOP Greenpoint G LLC



New York State Public Service Commission  
Office of Consumer Policy

Submetering Identification Form



Name of Entity:	BOP Greenpoint G LLC	Corporate Address:	250 Vesey Street, 15th floor
City:	Brooklyn	State:	NY
Zip:	11222	Web Site:	www.brookfield.com
Phone:		Utility Account Number:	
Chief Executive:	Daniel Berger	Account Holder Name:	Daniel Berger
Phone:	212-417-7519	E-mail:	dan.berger@brookfield.com
DPS Case Number:			

Primary Regulatory Complaint Contact

Secondary Regulatory Complaint Contact

Name:	Linda Early	Name:	N/A
Phone:	212-978-1699	Phone:	
Fax:		Fax:	
E-mail:	linda.early@brookfield.com	E-mail:	
Address:	250 Vesey Street, 95 Fl.	Address:	
City:	New York	City:	
State:	N.Y.	State:	
Zip:	10281	Zip:	

We do not send complaints to personal e-mail addresses. A shared e-mail address must be provided or the transmission will default to the fax number listed above. Please enter the e-mail address, if any, to which we should send complaints: \_\_\_\_\_

Name of Property:	37 Blue Slip	Service Address:	37 Blue Slip
City:	Brooklyn	State:	N.Y.
Zip:	11222		
Electric Heat?	Y/N	Electric Hot Water?	Y/N
# Units Occupied by:	Sr. Citizens N/A Disabled N/A	Total # of Units	359
Rent Stabilized	N/A	# Rent-Regulated	N/A
Rental:	Y/N	# Market Rate	359
Condo:	Y/N	Co-Op:	Y/N
# Low Income	N/A	# Landlord Assist Program	N/A
# Section 8	N/A	# Other	N/A
Submeter / Billing Agent:	Quadrant Control	Address:	3300 Northern Blvd.
City:	Long Island City		2nd Floor
State:	NY		
Zip:	11101		
Contact Name:	Alison Christopher	Contact Phone:	212-930-9300
		Contact Fax:	212-930-9393

Please return this form within 5 days to:

Hon. Kathleen H. Burgess, Secretary to the Commission  
NYS Public Service Commission  
3 Empire State Plaza  
Albany, NY 12223-1350  
E-mail: secretary@dps.ny.gov

(Rev. 9/20/13)

Changes in contact  
information should  
be submitted within  
5 days of any  
personnel change.

***STATE OF NEW YORK***  
***DEPARTMENT OF STATE***

I hereby certify that the annexed copy has been compared with the original document in the custody of the Secretary of State and that the same is a true copy of said original.



WITNESS my hand and official seal of the  
Department of State, at the City of Albany,  
on October 16, 2015.

A handwritten signature in cursive script that reads "Anthony Giardina".

Anthony Giardina  
Executive Deputy Secretary of State

151015000640

New York State  
Department of State  
Division of Corporations, State Records  
and Uniform Commercial Code  
One Commerce Plaza, 99 Washington Ave.  
Albany, NY 12231  
www.dos.ny.gov

**APPLICATION FOR AUTHORITY  
OF  
BOP GREENPOINT G LLC**

*(Insert name of Foreign Limited Liability Company)*

Under Section 802 of the Limited Liability Company Law

**FIRST:** The name of the limited liability company is:

BOP GREENPOINT G LLC

If the name does not contain the required words or abbreviation pursuant to Section 204 of the Limited Liability Company Law, the following words or abbreviation is added to the name for use in this state:

(Do not complete this section unless the limited liability company's true name is not available pursuant to §204 of the Limited Liability Company Law.) The fictitious name under which the limited liability company will do business in New York is:

*(The fictitious name must contain the words "Limited Liability Company" or abbreviation "LLC" or "L.L.C.")*

**SECOND:** The jurisdiction of organization of the limited liability company is: Delaware

The date of its organization is: September 29, 2015

**THIRD:** The county within New York state in which the office, or if more than one office, the principal office of the limited liability company is to be located is: New York

**FOURTH:** The Secretary of State is designated as agent of the limited liability company upon whom process against it may be served. The address within or without this state to which the Secretary of State shall mail a copy of any process served against him or her is:

Corporation Service Company  
80 State Street, Albany, NY 12207-2543

151015000640



**FIFTH:** *(Check and complete the statement that applies)*


☒ The address of the office required to be maintained in the jurisdiction of its formation is:  
2711 Centerville Road, Suite 400, Wilmington, DE 19808

☐ If no office is required to be maintained in the jurisdiction of its formation, the address of the principal office of the limited liability company is:

**SIXTH:** The foreign limited liability company is in existence in its jurisdiction of formation at the time of filing of this application.

**SEVENTH:** The name of the authorized officer in its jurisdiction of its formation where a copy of its articles of organization is filed is (e.g. "Secretary of State"):  
Jeffrey W. Bullock, Secretary of the State of Delaware, Division of Corporations

The address for such officer is:  
401 Federal Street, Suite 4, Dover, DE 19901.

X   
(Signature)

Michelle L. Campbell  
(Type or print name)

Capacity of signer *(Check appropriate box)*:

- ☐ Member  
☐ Manager  
☒ Authorized Person

Please Note: A certificate of existence or, if no such certificate is issued by the jurisdiction of formation, a certified copy of the articles of organization of the limited liability company and all subsequent amendments therefore, or if no articles of organization have been filed, a certified copy of the certificate filed as its organizational base and all amendments thereto, must be attached to the application for authority when submitted for filing. If such certificate or certified copy is in a foreign language, a translation in English under oath of the translator shall be attached.

# Delaware

The First State

Page 1

I, JEFFREY W. BULLOCK, SECRETARY OF STATE OF THE STATE OF DELAWARE, DO HEREBY CERTIFY "BOP GREENPOINT G LLC" IS DULY FORMED UNDER THE LAWS OF THE STATE OF DELAWARE AND IS IN GOOD STANDING AND HAS A LEGAL EXISTENCE SO FAR AS THE RECORDS OF THIS OFFICE SHOW, AS OF THE FOURTEENTH DAY OF OCTOBER, A.D. 2015.

AND I DO HEREBY FURTHER CERTIFY THAT THE SAID "BOP GREENPOINT G LLC" WAS FORMED ON THE TWENTY-NINTH DAY OF SEPTEMBER, A.D. 2015.

AND I DO HEREBY FURTHER CERTIFY THAT THE ANNUAL TAXES HAVE BEEN PAID TO DATE.



5837549 8300

SR# 20150500114

You may verify this certificate online at [corp.delaware.gov/authver.shtml](http://corp.delaware.gov/authver.shtml)

A handwritten signature in black ink, appearing to read "JBULLOCK", is written over a horizontal line. Below the line, the text "Jeffrey W. Bullock, Secretary of State" is printed in a small font.

Authentication: 10235100

Date: 10-14-15

640

APPLICATION FOR AUTHORITY  
OF

BOP GREENPOINT G LLC

*(Insert name of Foreign Limited Liability Company)*

Under Section 802 of the Limited Liability Company Law

Filed by: Janice Fernandes

*(Name)*

Brookfield Place, 181 Bay Street, Suite 330

*(Mailing address)*

Toronto, ON M5J2T3

*(City, State and Zip code)*

NOTE: This form was prepared by the New York State Department of State for filing an application for authority for a foreign limited liability company to conduct business in New York State. It does not contain all optional provisions under the law. You are not required to use this form. You may draft your own form or use forms available at legal supply stores. The Department of State recommends that legal documents be prepared under the guidance of an attorney. The certificate must be submitted with a \$250 filing fee made payable to the Department of State.

FILED

2015 OCT 15 PM 3:53

*(For office use only.)*

1cc

STATE OF NEW YORK  
DEPARTMENT OF STATE

FILED OCT 15 2015

TAXS \_\_\_\_\_  
EX. LAP

RECEIVED

2015 OCT 15 PM 1:02

## **NOTIFICATION OF RIGHTS AND PROCEDURES**

As a residential customer for electricity, you have certain rights assured by New York's Home Energy Fair Practices Act ("HEFPA"). This notification is an overview of those rights and certain policies and procedures regarding the service and billing of your electricity. A copy of this notification of rights and procedures will be available in the management office for your convenience. For a full explanation of HEFPA, you can go to the Department of Public Service's website at [www.dps.ny.gov](http://www.dps.ny.gov), or you may review a copy of the regulations in the property manager's office.

The building at **37 Blue Slip, Brooklyn, New York 11222** will be a submetered facility. **BOP Greenpoint G LLC** is the owner of this building. The administration of submetering will be performed by an outside vendor, Quadlogic Controls Corporation ("Quadlogic"), located at 33-00 Northern Blvd., Long Island City, NY 11101. Quadlogic is a third-party agent under contract with **37 Blue Slip, Brooklyn, New York 11222** to invoice/bill tenants for their monthly utility usage. Tenants will receive monthly bills from Quadlogic for their respective electric usage, (meters are read daily) which amounts are payable to **Brookfield Place, 250 Vesey Street, 15<sup>th</sup> Floor, New York, NY 10281**. Management could also be contacted at **212-978-1699**.

When a tenant has a question about electric bill or believes the electric bill is inaccurate, the following protocol will be followed: (the building is currently not occupied)

Tenant should submit the complaint to the property manager of the Building, including the action or relief requested and/or the reason for a complaint about a submetering charge. The property manager shall investigate and respond to the complaint in writing within 15 days of the receipt of the complaint. **The Property Management is Brookfield Place, 250 Vesey Street, 15<sup>th</sup> Floor, New York, NY 10281. The Property Manager; Linda Early can be reached at 212-978-1699 and email address [Linda.early@brookfield.com](mailto:Linda.early@brookfield.com).** If the tenant and the property manager cannot reach an equitable agreement and tenant continues to believe the complaint has not been adequately addressed, then the tenant may file a complaint with the Public Service Commission through the Department of Public Service. Alternatively, tenants may contact the Department of Public Service at any time concerning submetered service in writing at New York State Department of Public Service, 3 Empire State Plaza, Albany, New York 12223, by telephone at 1-800-342-3377, in person at the nearest office at 90 Church Street, New York, New York 10007, or via the Internet at [www.dps.ny.gov](http://www.dps.ny.gov)

The electric bills that you receive show the amount of kilowatt hours ("kWh") that you used. The bills you receive shall provide, in clear and understandable form and language, the charges for service. In no event will the total monthly charges (including any administrative charges) exceed the utility's (Consolidated Edison Company of New York, Inc.) direct metered residential rate.

You have the right to request messages on bills and notices in Spanish. To make

such a request, contact a representative by telephone at **(212-978-1699)** or by mail at c/o **Brookfield Place, 250 Vesey Street, 15<sup>th</sup> Floor, New York, NY 10281**. Usted tiene el derecho de solicitar informacion en facturas e informativos en Espanol. Para solicitar informacion en Espanol, por favor contacte a un representante marcando el telefono **212-978-1699** o por correo escrito a la siguiente direccion: c/o **Brookfield Place, 250 Vesey Street, 15<sup>th</sup> Floor, New York, NY 10281**.

You may request balanced billing for the payment of electric charges. This plan shall be designed to reduce fluctuations in customers' bills due to seasonal patterns of consumption. Balanced billing divides your electric costs into twelve (12) equal monthly payments. Periodically, **37 Blue Slip, Brooklyn, New York 11222** will review and adjust the balanced billing amount as necessary. At the end of one (1) year, you shall be responsible to pay for any electric costs in excess of your balanced billing amount paid. You may contact **37 Blue Slip, Brooklyn, New York 11222** to discuss the details of this plan, if you are interested.

Your meter is read because it measures and records the actual amount of electric you use; this enables an accurate bill to be sent to you. Making sure your electric bills are accurate and correct is important to **37 Blue Slip, Brooklyn, New York 11222** and to you. That is why every effort is made to read your meter regularly.

You may qualify for a rate reduction the equivalent of that which is provided by Con Edison to customers who are enrolled in its low-income program pursuant to its tariff (see P.S.C. No. 9 – Electricity, Thirtieth Revised Leaf No. 202). If you receive benefits under Supplemental Security Income, Temporary Assistance to Needy Persons/Families, Safety Net Assistance, or Food Stamps, or have received a Home Energy Assistance Program grant in the preceding twelve (12) months, please alert a **37 Blue Slip, Brooklyn, New York 11222** representative by phone or in writing and he/she will work with you.

If you are having difficulty paying your electric bill, please contact us by telephone or by letter in order to arrange for a deferred payment agreement, whereby you may be able to pay the balance owed over a period of time. A deferred payment agreement is a written agreement for the payment of outstanding charges over a specific period of time, signed by both the submeterer and customer. If you can show financial need, **37 Blue Slip, Brooklyn, New York 11222** can work with you to determine the length of the agreement and the amount of each monthly payment. You may not have to make a down payment, and installment payments may be as little as \$10.00 per month. **37 Blue Slip, Brooklyn, New York 11222** will make reasonable efforts to help you find a way to pay your bill.

Regardless of your payment history relating to your electric bills, your electric service will be continued if your health or safety is threatened. When **37 Blue Slip, Brooklyn, New York 11222** becomes aware of such hardship, **37 Blue Slip, Brooklyn, New York 11222** can refer you to the Department of Social Services. Please notify **37 Blue Slip, Brooklyn, New York 11222** Street if the following conditions exist:

- (a) **Medical Emergencies.** You must provide a medical certificate from your doctor or local board of health; or
- (b) **Life Support Equipment.** If you have life support equipment and a medical certificate.

Special protections may be available if you and/or those living with you are age eighteen (18) or younger or sixty-two (62) and older, blind, or disabled.

To ensure that you receive all of the protections that you are eligible for, please contact a **37 Blue Slip, Brooklyn, New York 11222** representative and identify yourself.

You can also designate a third party as an additional contact to receive notices of past due balances.

Every submeterer shall permit a residential customer to designate a third party to receive all notifications relating to disconnection of service or other credit actions sent to such residential customer, provided that the designated third party agrees in writing to receive such notices. The submeterer shall inform the third party that the authorization to receive such notices does not constitute acceptance of any liability on the third party for service provided to the customer. The submeterer shall promptly notify the residential customer of the refusal or cancellation of such authorization by the third party. If you are interested in Voluntary Third-Party Notice, notify **37 Blue Slip, Brooklyn, New York 11222** with the party's contact information and written agreement of the third party to receive copies of all notifications relating to disconnection of service or other credit actions sent to you.

Please review the attached "Special Protections Registration Form" relating to some of the rights discussed above. Although you are not required to do so, it is requested that you please fill it out if you qualify for any special protection described on the form. You may return the completed form to **37 Blue Slip, Brooklyn, New York 11222** at the address above.

## BUDGET BILLING PLAN

Resident(s) Name(s): \_\_\_\_\_

Address: \_\_\_\_\_

Account No.: \_\_\_\_\_

As set forth below, **Brookfield Place, 250 Vesey Street, 15<sup>th</sup> Floor, New York, NY 10281 (37 Blue Slip, Brooklyn, New York 11222)** agrees to provide services in return for your agreement to make payments according to the terms of this Budget Billing Plan (the "Plan").

The Plan requires that you pay **\$XX.XX** per month for the 12-month period starting with the billing cycle commencing on **MM/DD/YYYY** and ending on **MM/DD/YYYY**.

This monthly payment is based on an estimate of your annual billing, which has been calculated by multiplying the average monthly consumption by the current estimate of commodity prices over the above-referenced 12-month period. Your average monthly consumption is \_\_\_\_\_ kWh, based on your or the premises' last 12 months of actual consumption.

The Plan shall be subject to regular review for conformity with actual billing. **37 Blue Slip, Brooklyn, NY 11222** reserves the right to recalculate the monthly payment to reflect either (a) an increase in consumption beyond the average monthly consumption, and/or (b) an increase in commodity prices.

Each month, you will be billed the equal monthly payment and you will be required to pay that amount. Your bill will inform you what your consumption for the period was, as well as the actual charge you would have incurred if you were not on the Plan. If you fail to pay the bill when due, you may be subject to a final termination notice pursuant to the Home Energy Fair Practices Act or other collection remedies.

In the last month of the Plan, **37 Blue Slip, Brooklyn, NY 11222** Street shall true up your account based on a comparison of the billing under the Plan and the amount you would have been charged for the 12-month period if you were not on the Plan. If you owe **37 Blue Slip, Brooklyn, NY 11222** Street a sum of money due to the true up, you will be billed for the amount due. If you have been over billed, you will be issued a credit to be applied to the next plan year.

[ ] **Yes! I would like budget billing and agree to the terms of the Plan.**

### Acceptance of Agreement:

Resident(s) Signature(s): \_\_\_\_\_

Date: \_\_\_\_\_

Brookfield Place \_\_\_\_\_

Date: \_\_\_\_\_

**Return one signed copy to 37 Blue Slip, Brooklyn, NY 11222 by MM/DD/YYYY**

## **Residential Payment Agreement**

Resident(s) Name(s): \_\_\_\_\_

Address: \_\_\_\_\_

Account No.: \_\_\_\_\_

The total amount owed to **Brookfield Place, 250 Vesey Street, 15<sup>th</sup> Floor, New York, NY 10281** on this account as of **MM/DD/YYYY** is **\$XX.XX**.

Subject to 16 NYCRR § 11.10 (a-b) of the Home Energy Fair Practices Act ("HEFPA"), **Brookfield Place, 250 Vesey Street, 15<sup>th</sup> Floor, New York, NY 10281** is required to offer a payment agreement that you are able to pay considering your financial circumstances. **This agreement should not be signed if you are unable to keep the terms.** Alternate terms may be available if you can demonstrate financial need. Alternate terms may include no down payment and payments as low as \$10 per month above your current bills. **If you sign and return this form, along with a down payment of \$XX.XX, by MM/DD/YYYY, you will be entering into a payment agreement and, by doing so, will avoid termination of electricity service.**

Assistance to pay utility bills may be available to recipients of public assistance or supplemental security income from your local social services office. This agreement may be changed if your financial circumstances change significantly because of conditions beyond your control. If after entering into this agreement, you fail to comply with the terms, **Brookfield Place, 250 Vesey Street, 15<sup>th</sup> Floor, New York, NY 10281** may terminate your electricity service. If you do not sign this agreement or pay the total amount due of **\$XX.XX** by **MM/DD/YYYY**, **Brookfield Place, 250 Vesey Street, 15<sup>th</sup> Floor, New York, NY 10281** may seek to terminate your electricity service. **If you are unable to pay these terms, if further assistance is needed, or if you wish to discuss this agreement, please call Brookfield Place, 250 Vesey Street, 15<sup>th</sup> Floor, New York, NY 10281.**  
**Tel: 212-978-1699**

### **Payment of Outstanding Balance:**

**Your current monthly budget amount is: \$XX.XX (in addition to your current electricity charges)**

If you are not already enrolled in our Budget Billing Program, which allows you to pay for your service in equal monthly installments, and wish to enroll, check the box below and we will start you on this process.

**Yes! I would like Budget Billing:** ☐

### **Acceptance of Residential Payment Agreement:**

Resident(s) Signature(s): \_\_\_\_\_ Date: \_\_\_\_\_

This agreement has been accepted by **Brookfield Place, 250 Vesey Street, 15<sup>th</sup> Floor, New York, NY 10281**. If you and **Brookfield Place, 250 Vesey Street, 15<sup>th</sup> Floor, New York, NY 10281** cannot negotiate a payment agreement, or if you need any further assistance, you may contact the Public Service Commission at 1-800-342-3377.

**Return one copy of this agreement signed, along with the down payment of \$XX.XX, by MM/DD/YYYY to the Brookfield Place, 250 Vesey Street, 15<sup>th</sup> Floor, New York, NY 10281. If this is not done, your electricity service may be terminated.**



**FAILURE TO MAKE PAYMENT NOTICE DATED:**

Resident(s) Name(s): \_\_\_\_\_

Address: \_\_\_\_\_

Account No.: \_\_\_\_\_

Dear [customer name]:

Your account is now ninety (90) days overdue. Please make payment of **\$XX.XX** by **MM/DD/YY** or we shall institute termination of your electricity service.

**PLEASE REMIT \$XX.XX BY MM/DD/YY TO AVOID INITIATION OF TERMINATION OF YOUR ELECTRICITY SERVICE.**

If you are unable to make payment because your financial circumstances have changed significantly due to events beyond your control, please contact **Brookfield Place, 250 Vesey Street, 15<sup>th</sup> Floor, New York, NY 10281** at **212-978-1699**. If you or anyone in your household meets any of the following conditions please contact us: medical emergency, elderly, blind, or disabled.

Sincerely,

**Brookfield Place**

**FINAL TERMINATION NOTICE DATED:**

Resident(s) Name(s): \_\_\_\_\_

Address: \_\_\_\_\_

Account No.: \_\_\_\_\_

Dear [customer name]:

By letter dated **MM/DD/YY**, we notified you that your failure to remit the past due amount of **\$XX.XX** by **MM/DD/YY** would result in our terminating your electricity service. Our records indicate that we have not received your payment. Please remit **\$XX.XX** or your service will be terminated after **MM/DD/YY**.

If you disagree with the amount owed, you may call or write **Brookfield Place, 250 Vesey Street, 15<sup>th</sup> Floor, New York, NY 10281** (telephone # **212-978-1699**) or you may contact the Public Service Commission at 1-800-342-3377.

**THIS IS A FINAL TERMINATION NOTICE. PLEASE BRING THIS NOTICE TO OUR ATTENTION WHEN PAYING THIS BILL.**

**PLEASE REMIT \$XX.XX BY MM/DD/YY TO AVOID TERMINATION OF YOUR ELECTRICITY SERVICE.**

If you are unable to make payment because your financial circumstances have changed significantly due to events beyond your control, please contact **Brookfield Place, 250 Vesey Street, 15<sup>th</sup> Floor, New York, NY 10281**. If you or anyone in your household meets any of the following conditions please contact **Brookfield Place, 250 Vesey Street, 15<sup>th</sup> Floor, New York, NY 10281**: medical emergency, elderly, blind, or disabled.

Sincerely,

**Brookfield Place**

**NOTIFICATION TO SOCIAL SERVICES OF CUSTOMERS**  
**INABILITY TO PAY**

**Brookfield Place, 250 Vesey Street, 15<sup>th</sup> Floor, New York, NY 10281**  
**Tel: 212-978-1699**

Resident(s) Name(s): \_\_\_\_\_

Address: \_\_\_\_\_

Account No.: \_\_\_\_\_

The above resident/customer has been sent a final notice of termination of electricity service. If the total payment due of **\$XX.XX** is not paid by **MM/DD/YYYY**, termination of their electricity service may occur anytime after **MM/DD/YYYY**.

## **Past Due Reminder Notice**

RESIDENT(S) NAME(S): \_\_\_\_\_

ADDRESS: \_\_\_\_\_

ACCOUNT NO.: \_\_\_\_\_

On **MM/DD/YYYY**, you signed a Residential Deferred Payment Agreement (DPA), which obligated you to make a down payment of **\$XX.XX** by **MM/DD/YYYY** and regular payments of **\$XX.XX** (in addition to your current electricity charges) in order to avoid termination of electricity service. Our records indicate that you have failed to comply with the terms of the DPA. As a result, we are hereby notifying you that you must meet the terms of the existing DPA by making the necessary payment within twenty (20) calendar days of the date payment was due or a final termination notice may be issued to terminate your electricity service.

If you are unable to make payment under the terms of the DPA because your financial circumstances have changed significantly due to events beyond your control, you should immediately contact **Brookfield Place, 250 Vesey Street, 15<sup>th</sup> Floor, New York, NY 10281** because a new payment agreement may be available. Further, assistance to pay utility bills may be available to recipients of public assistance or supplemental security income from your local social services office.

**The total amount owed to Brookfield Place, 250 Vesey Street, 15<sup>th</sup> Floor, New York, NY 10281 for this account as of MM/DD/YYYY is: \$XX.XX.**

## Quarterly Billing Plan

**Customer Name:** \_\_\_\_\_  
**Premise Address:** \_\_\_\_\_  
**Account Number:** \_\_\_\_\_

Under this plan, **Brookfield Place, 250 Vesey Street, 15<sup>th</sup> Floor, New York, NY 10281** agrees to provide services in return for your agreement to make payments according to terms of this Plan.

The Customer confirms that he/she is greater than 62 years old, and that the Customer's bills in the preceding 12 months starting on MM/DD/YY and ending on MM/DD/YY, did not exceed \$150.

Under this Plan, the Customer will receive the first bill on MM/DD/YY covering actual charges incurred during the 3-month period MM/DD/YY to MM/DD/YY, and you will receive quarterly bills thereafter on or before MM/DD/YY, MM/DD/YY, and MM/DD/YY for actual charges incurred during each such preceding 3-month period.

On the dates specified above, you will be billed for actual charges incurred and you will be required to pay such amount stated on the bill. If you fail to pay the bill when it is due, you may be subject to termination of service pursuant to the Home Energy Fair Practices Act.

**[ ] Yes!! would like Quarterly Billing:**

**Return one completed copy to Brookfield Place, 250 Vesey Street, 15<sup>th</sup> Floor, New York, NY 10281 by MM/DD/YYYY.**

**CONFIDENTIAL**  
***Evaluation of Customer's Ability To Pay***

---

1. Employer Name, Address and Phone Number

---

---

2. What is your monthly income?

3. Please identify all other forms of income (Unemployment, Disability, and Public Assistance) and the amounts of each

---

4. Please list all checking and savings accounts and balances:

---

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5. Please list all credit cards, balances due and the amount of the monthly payment on each:

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6. Do you own your home or do you rent? \_\_\_\_\_

7. What is your monthly mortgage or rent payment? \_\_\_\_\_.

8. List other assets (i.e., Stocks and Bonds) :

---

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9. List other debts (bank loans, credit lines, utility bills, etc.) and the amount of the monthly payment on each:

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---

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10. Identify all other monthly expenditures by amount:

- Food expenses	\$	_____
- Medical expenses	\$	_____
- Telephone bills	\$	_____
- Utility bills	\$	_____
- Mandatory loan/credit card payments	\$	_____
- Other	\$	_____
	\$	_____
	\$	_____
	\$	_____
	\$	_____

**SPECIAL PROTECTIONS  
REGISTRATION FORM**

Please complete this form if any of the following applies. Return this form to:

**Brookfield Place, 250 Vesey Street, 15<sup>th</sup> Floor, New York, NY 10281  
Tel: 212-978-1699**

**ACCOUNT INFORMATION**

(Be sure to complete before mailing)

\_\_\_\_\_  
Name

\_\_\_\_\_  
Address

\_\_\_\_\_  
Apartment

\_\_\_\_\_  
Town/City

\_\_\_\_\_  
Zip

\_\_\_\_\_  
Telephone # Daytime

\_\_\_\_\_  
Evening

\_\_\_\_\_  
Account Number (as shown on bill)

**I would like to be considered for Special Protections.**

In my household (Check):

- ☐ Unit Owner is 62 years of age or over, and any and all persons residing therewith are either 62 years of age or under 18 years of age.
- ☐ Unit Owner is blind (Legally or Medically)
- ☐ Unit Owner has a permanent disability
- ☐ Unit Owner/resident of my house has a Medical Hardship (type):  
\_\_\_\_\_

- ☐ Unit Owner/resident of my house has a Life Support Hardship (type):  
\_\_\_\_\_

**I receive government assistance.**

- ☐ I receive Public Assistance (PA). My case number is:

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- ☐ I receive Supplemental Security Income (SSI). Note: SSI benefits are not the same as Social Security Retirement Benefits. My Social Security Number (optional) is:

---

**Please send me more information about:**

- ☐ Balanced billing

**To be Completed by Third Party**

Please let me know if this customer's bill is overdue. As a "caregiver," I understand that I am not responsible for payment of this bill.

---

Caregiver/Agency

---

Address

---

Apartment

---

Town/City

---

Zip

---

Telephone # Daytime

---

Evening

---

Designee Signature



**Submetering Lease Rider**  
**37 Blue Slip, Brooklyn, New York, 11222**

1. You acknowledge that BOP Greenpoint G LLC, will be the provider of electricity to the building and that the tenant will be paying the charges for such electricity directly to this entity (or its successor), You will be required to pay Owner for the use of electricity at the Apartment on the basis of a separate (submetered) charge that will be billed to You by Owner (or its agent) on a monthly basis. The charges to You for electricity are due without offset or abatement on the first day of each and every month for which a bill is rendered. In the event of non-payment of electric charges, the Owner shall afford You all notices and protections available to You pursuant to the Home Energy Fair Practices Act (HEFPA) before any action(s) based on such non-payment, including termination of service, is commenced. In, the event that a tenant is invoiced incorrectly, the property management will refund the tenant affected by the submeterer actions that led to such refunds provided that the submeterer has such contact information for the residents.

2. Method to be used to calculate rates to residents

The average rate calculation is derived by taking the total dollar cost charged to the building by Consolidated Edison (Con Edison) (and ESCO if applicable) and dividing it by the total electric usage (kWh) of the building for a specific period. The cost per kWh is then multiplied by the tenant's actual consumption plus sales tax to derive total electric cost.

The following is an example of the formula that will be used to derive a tenant's electricity charges based on Average rate and a monthly usage of 250 kWh:

		<b>Total</b>
Total building's cost: Con Edison (and ESCO if applicable)	\$AA.AA	
Total building kWh	BBBB	
Rate	\$AA.AA / BBBB	\$CC.CC
kWh (Tenant)	250 times \$CC.CC	\$YY.YY
Sales Tax	YY.YY times .045000	\$ T.TT
	YY.YY plus T.TT	\$ZZ.ZZ
<b>Tenant Cost</b>		<b>\$ZZ.ZZ</b>

In no event will the total monthly rates (including any monthly administrative charge) exceed the utility's tariff residential rate for direct metered service to such residents (see 16 NYCRR § 96.2)

All Con Edison rates by classification are available on its website ([www.coned.com](http://www.coned.com)) under Rates and Tariffs. The electric Rates and Tariffs are listed under the heading "PSC No. 10" – Electric: Full Service

The meter reading data and billing calculations will be documented and maintained for a 6-year period for each unit.

3. When a tenant has a question about electric bill or believes the electric bill is inaccurate, the following protocol will be followed: (the building is currently not occupied)

Tenant should submit the complaint to the property manager of the Building, including the action or relief requested and/or the reason for a complaint about a submetering charge. The property manager shall investigate and respond to the complaint in writing within 15 days of the receipt of the complaint **The Property Management is Brookfield Place, 250 Vesey Street, 15<sup>th</sup> Floor, New York, NY 10281. The Property Manager; Linda Early can be reached at 212-978-1699 and email address [Linda.early@brookfield.com](mailto:Linda.early@brookfield.com).** If, the tenant and the property manager cannot reach an equitable agreement and tenant continues to believe the complaint has not been adequately addressed, then the tenant may file a complaint with the Public Service Commission through the Department of Public Service. Alternatively, tenants may contact the Department of Public Service at any time concerning submetered service in writing at New York State Department of Public Service, 3 Empire State Plaza, Albany, New York 12223, by telephone at 1-800-342-3377, in person at the nearest office at 90 Church Street, New York, New York 10007, or via the Internet at [www.dps.ny.gov](http://www.dps.ny.gov)

4. You will be afforded rights and protections available to residential energy consumers in New York State under HEFPA, including the ability to file a complaint with the PSC. The nearest office of the PSC is at: NYS Public Service Commission, 90 Church Street, New York, NY 10007, 212-417-2234, 800-342-3377, [www.dps.ny.gov](http://www.dps.ny.gov). You may contact the PSC at any time if You are dissatisfied regarding management's response to Your complaint or at any time regarding submetered service.
5. You may request balanced billing for Your electric charges. Balanced billing divides the electric costs into equal monthly payments. Periodically, the balanced billing amounts will be reviewed and adjusted as necessary. At the end of one year, You shall be responsible to pay for any electric costs in excess of the balanced billing amount paid.
6. If You have difficulty paying the electric bill, You may contact the management company for the Building by telephone or by letter in order to arrange for a deferred payment agreement, whereby You may be able to pay the balance owed over a period of time. If You can show financial need, the management company for the Building can work with You to determine the length of the agreement and the amount of each monthly payment.
7. Regardless of Your payment history, the management company and submeterer of the Building will continue electric service if Your health or safety is threatened. When You become aware of such hardship, the management company for the Building can refer You to the Department of Social Services. Please notify the management company for the Building if the following conditions exist:
  - a. **Medical Emergencies.** You must provide a medical certificate from a doctor or local board of health; or
  - b. **Life Support Equipment.** If You have life support equipment and a medical certificate.

8. Special protections may be available if You and/or those living with You are age eighteen (18) or younger or sixty-two (62) and older, blind, or disabled.
9. If You are age sixty-two (62) or older, You may be eligible for quarterly billing for Your electrical charges.
10. You can designate a third party as an additional contact to receive notices of past due balances for your electrical charges.
11. As a residential customer for electricity, You also have certain additional rights assured by HEFPA.
12. You agree that at all times the use of electricity in the Apartment shall never exceed the capacity of existing feeders to the Building or the risers, wiring or electrical installations serving the Apartment. You shall not make any alterations, modifications or additions to the electrical installations serving the Apartment.
13. Owner shall have the right to suspend electric service to the Apartment when necessary by reason of accident or for repairs, alterations, replacements or improvements necessary or desirable in Owner's judgment for as long as may be reasonably required by reason thereof and Owner shall not incur any liability for any damage or loss sustained by You or any other occupant of the Apartment as a result of such suspension. Owner shall not in any way be liable or responsible to You or any other occupant for any loss, damage, cost or expense that You or any occupant of the Apartment may incur if either the quantity or character of electric service is changed or is no longer available or suitable for Your requirements or if the supply or availability of Electricity is limited, reduced, interrupted, or suspended by the public utility company serving the Building or for any reason or circumstances beyond the control of Owner. Except as may be provided by applicable law, You shall not be entitled to any rent reduction because of a stoppage, modification, interruption, suspension, limitation, or reduction of electric service to the Apartment.
14. If Owner (or its agent) fails to deliver a bill to You for the use of electricity at the Apartment for any given month, then such failure shall not prejudice or impair Owner's right to subsequently deliver or cause its agent to deliver such a bill to You, nor shall any such failure relieve or excuse You from having to pay to such bill, except as may otherwise be provided by applicable law.
15. You may qualify for a rate reduction the equivalent of that which is provided by your utility to customers who are enrolled in its low-income program pursuant to its tariff (see P.S.C. No. 10 – Electricity, Thirtieth Revised Leaf No. 202). If you receive benefits under Supplemental Security Income, Temporary Assistance to Needy Persons/Families, Safety Net Assistance, or Food Stamps, or have received a Home Energy Assistance Program grant in the preceding twelve (12) months, please alert a management representative by phone or in writing and he/she will work with you.

## ENERGY SAVING IDEAS

*Conserve Energy. Save Money. Protect the Environment.*

What can you do to lower your electric bill? Quadlogic has put together the following guidelines to help you conserve energy and lower your electric bill. This information was collected from various sources\*, and is intended to show you how easy it can be to make a few changes that won't have a big impact on your lifestyle but *will* have a big impact on your electric bill.

### LIGHTING

- ❖ Replace ordinary light switches with dimmers. Dimmers let you set bulb brightness to suit different needs. Whenever lights are set at less than full brightness, you save energy.
- ❖ Replace ordinary incandescent bulbs with new compact fluorescent bulbs. Compact fluorescent bulbs give the same light levels as the ordinary bulbs they replace, but use 40-60% less energy.
- ❖ Use timers to turn off lights when you're away from home. That saves energy and adds security to your home.
- ❖ Use lower wattage bulbs whenever you can. Wattage isn't a measure of brightness, it's a measure of energy usage. The lower the wattage, the less energy used.
- ❖ Replace ordinary switches with motion sensors. Motion sensors monitor a room for the presence of people. When someone enters the room, lights go on automatically so you don't light an unoccupied room.

### APPLIANCES

- ❖ Choose Energy Star appliances, which use considerably less energy than other appliances.
- ❖ Use your refrigerator as efficiently as possible by keeping the condenser coils clean.
- ❖ Use washers, dryers and dishwashers efficiently. Every time these appliances go through a cycle, they use very nearly the same amount of energy whether empty or full. So cleaning with full loads makes for best efficiency and best value on your energy dollars.
- ❖ Switch off the "instant on" feature in electronic devices. Many electronic products have an "instant on" circuit that uses energy continuously, even when the device is turned off. On some electronic devices, you can choose to turn it off.

### COMPUTER & HOME OFFICE EQUIPMENT

- ❖ Turn your computer off when it is not in use. Much of the energy use associated with computer is wasted because PC's are often left on when not in use, including nights, weekends, and even extended periods of inactivity during the day.

- ❖ Turn off your display device or monitor. Monitors consume a significant portion of the energy used by PC's.
- ❖ Use a laptop. A typical laptop computer has a maximum power consumption of 15 watts, and extensive power management capabilities. A typical desktop PC, with display consumes about 10 times that or 150 watts, and has limited power management features. The potential energy savings from substituting PC's with portable laptops are large, up to 90% or more.
- ❖ Select a printer with power management capabilities. Printers with automatic "power down" features can reduce electricity use by over 65%.
- ❖ Select a fax machine with power management capabilities. Fax machines are generally turned on 24 hours-a-day to receive incoming faxes. However, they are typically in use for only 5% of the total time they are turned on. Fax machines with power management features can reduce energy costs by almost 50%.

AVERAGE ANNUAL ENERGY CONSUMPTION			
Equipment	Conventional Products	Energy Saving Products	Potential Energy Savings
Desktop PC's	500 kWh	250 kWh	50%
Fax Machines	300 kWh	135 kWh	55%
Laser Printers	750 kWh	270 kWh	65%
Copier (Medium)	1200 kWh	535 kWh	55%
Copier (Large)	2800 kWh	1200 kWh	55%

You may find "Energy Star" appliances at your local retail stores.

#### **USEFUL LINKS**

[www.sears.com](http://www.sears.com)  
[www.circuitcity.com](http://www.circuitcity.com)  
[www.bestbuy.com](http://www.bestbuy.com)  
[www.pcrichard.com](http://www.pcrichard.com)  
[www.allcityappliance.com](http://www.allcityappliance.com)

#### **OTHER HELPFUL HINTS**

- ❖ Stop drafts coming in near doors, windows, or air conditioners. Drafts make the heating and cooling systems work harder therefore costing you more money.
- ❖ Stop leaks at faucets, toilets, tubs, and showers. If the leak is from hot-water faucets, it wastes the energy from your hot water heater and costing you more money.

\* Sources: Con Edison, LIPA, Orange and Rockland, NYSERDA, Niagra Mohawk, Southern California Edison.

## DIVISION 16 ELECTRICAL SPECIFICATIONS

### ELECTRIC SUBMETERING

Available in MS Word format:  
[www.quadlogic.com](http://www.quadlogic.com)  
Click "Support" then  
Submetering Specifications

#### PART 1 – GENERAL

##### 1.01 DESCRIPTION

- A. Provide electric submetering to meter electric consumption for each tenant in accordance with the Contract Documents.

##### 1.02 ELECTRONIC POWER METERING

- A. Provide electronic power metering where indicated complying with all requirements below. Meter(s) shall be Quadlogic Controls Corp. or approved equal.
- B. The meters shall be manually readable using local Liquid Crystal Display (LCD) via push-button and automatically readable utilizing Frequency Hopping Spread Spectrum Power Line Carrier Communication ("PLC").
- C. The metering system shall consist of the Quadlogic, MiniCloset-5N, & Transponder(s) or equal.
- D. Meter shall be configured for [residential] [commercial] application and applied on [120/240V] [120/208V] [277/480V] [347/600V] [480V delta 3P3W] [600V delta 3P3W] nominal systems or as indicated on the drawings.
  - 1. Residential Use (kWh):
    - a. 120/208V single phase, 3 wire (2 pole)
    - b. 120/240V split phase, 3 wire
  - 2. Commercial/Industrial Use (kWh and Demand):
    - a. 120/208V, 277/480V and 347/600V, 3 phase/4 wire
    - b. 480V and 600V Delta, 3 phase/3 wire
- E. **NOTE TO SPECIFIER: DELETE FOLLOWING PARAGRAPH IF METER IS CONFIGURED FOR RESIDENTIAL APPLICATION.** [kW Demand shall be measured and recorded every [15] minutes. (Demand is factory configured in block intervals. Rolling (overlapping) time interval demand shall also be configurable as an option.) Demand shall be recorded along with the time and date at which it occurs. The meter shall be classed as a mass memory interval meter (meters which record and store the energy use by time). The demand interval and optional time-of-use schedules shall be factory programmed and stored in each meter. Daily peak demands shall be capable of being read by a remote computer.]
- F. **NOTE TO SPECIFIER: DELETE FOLLOWING PARAGRAPH IF METER IS CONFIGURED FOR COMMERCIAL APPLICATION.** [kW Demand shall be measured and recorded every [60] minutes. (Demand is factory configured in block intervals. Rolling (overlapping) time interval demand shall also be configurable as an option.) Demand shall be recorded along with the time and date at which it occurs. The meter shall be classed as a mass memory interval meter (meters which record and store the energy use by time). The demand interval and optional time-of-use schedules shall be factory programmed and stored in each meter. Daily peak demands shall be capable of being read by a remote computer.]

## DIVISION 16 ELECTRICAL SPECIFICATIONS

- G. The Meter shall have the following Testing and Certification:
1. UL/CUL recognized
  2. Meets or exceeds requirements of ANSI C12.1, ANSI/IEEE C37.90.2, ANSI/IEEE C37.90.1, and Measurement Canada.
- H. Each meter shall interface to the electrical load being measured with a direct voltage tap, up to 600 VAC, and with 0.1Amp or 5.0A secondary for split and solid core current transformers.
- I. Monitoring
1. Provide true RMS measurement of current, volts, %THD, kW, kVA, kVAR, kWh, power factor.
  2. The Meter shall have an accuracy of  $\pm 0.5\%$  or better.
- J. User Interface
1. Reading shall be accessible on a local LCD display. The display shall consist of two rows of 16 characters on each row. The consumption reading shall be up to six (6) digits.
  2. Provide an IEC type optical port capable of direct connection to a laptop.
- K. The system shall be a fully automated, microprocessor-based electric utility measurement system. The system shall be capable of measuring and recording the usage of electricity and shall be capable of communicating the reading to an optional on-site or remote computer (i.e. the billing computer) via modem or other means of communications.
- L. The meter shall not depend on battery power for maintaining functionality. Meter shall monitor all metering parameters and perform communication tasks using a non-volatile flash memory. On-board battery shall only be used in power failure to maintain time, log incoming pulses (if applicable) and to store the data acquired within the incomplete interval at the time of the power failure.
- M. Each meter shall be capable of reading minimum of four (4) dry contact, Form A pulse inputs to automate the reading of other utilities such as gas, water or BTU's. MiniCloset-5 and MiniCloset-5c shall be capable of reading up to 48 pulses.
- N. Each meter shall be equipped with a clock/calendar that automatically accommodates leap years. The clock/calendar shall be backed up by battery and continue operating during power outages. The time and date shall be automatically synchronized by the Scan Transponder(s) and capable of being reset by a remote computer.
- O. Each meter shall be complete with internal CT termination and shorting and fuse block <where applicable>.
- P. Revenue related metering parameters (i.e. demand intervals) shall be permanent and stored in each individual meter. It shall not be possible to change metering parameters through unauthorized access to the system.
- Q. Provide Phase Diagnostic Registers that include multipliers for amperage, voltage, watts, and line frequency. On a per-phase basis Phase Diagnostics shall include voltage, VAR phase shift, accumulated kWh and kVARh and instantaneous amps, watts, VAR's, VA's, phase angle (degrees displacement between current and voltage waveforms), and Power Factor.

## DIVISION 16 ELECTRICAL SPECIFICATIONS

- R. Provide Event Diagnostic Registers that include time and date and the number of times the time has been changed, number of power downs, power ups and start ups with time and date of last occurrence, and the number of times the accumulated peak demand has been reset, also with the time and date of the last occurrence. Meters that communicate by Power Line Carrier Communications shall also include counts of properly received messages, rejected messages and the numbers of transmissions without replay.
- S. On-board Memory Storage
  - 1. The meter shall maintain a minimum of 60-day log of daily Time-of-Use consumption, interval data and peak demand readings along with the time and date at which the daily peak demands occur. The consumptions recorded shall be the reading at the end of the Time-of-Use period of the end of the day. The peak demand recorded in the log shall be the peak demand for the Time-of-Use period for that day.
  - 2. Each meter shall maintain a minimum of 60-day date logging capacity consisting of fifteen (15) minute or hourly demands with time and date stamp.
  - 3. Memory shall be non-volatile.
- T. Control power for the meter shall be obtained via the monitored voltage connections. A separate control power input is not allowed.
- U. Communications Interface
  - 1. Where indicated in the drawings, the system shall communicate with a remote computer using one or more of the methods noted below. Preferred method communications method shall be Power Line Carrier Communications.
    - a. The meter shall communicate over the electrical power wiring to a Scan Transponder via bi-directional, frequency hopping, spread spectrum power line carrier communications. These signals shall be capable of passing through a single 600/120V or 480/120V transformer. The Scan Transponder and each meter shall select the best available combination of phase, frequency range and baud rate for communication at any given time.
    - b. RS-485. Install per manufacture's guidelines and recommended wire specification.
  - 2. All meters shall have as an option a local RS-485 serial port for direct connection to the PC.
  - 3. Individual meters shall be capable of being equipped with a modem for direct connection to a telephone line if necessary.

### 1.03 SCAN TRANSPONDER

- A. Scan Transponders shall be installed to collect data from meters on a daily basis and provide a centralized data access point.
- B. All communication shall be direct between a Scan Transponder and each meter, and under the control of the Scan Transponder. Meters will not repeat messages from other meters nor will message routing be determined by meters.
- C. A Scan Transponder shall be provided for every 240 electric metering points and one Scan Transponder shall be provided per utility transformer or electrical service.



## **DIVISION 16 ELECTRICAL SPECIFICATIONS**

Contractor shall provide required location, quantities and voltage connections for Transponders based on manufacture's specifications and instructions.

- D. Scan Transponder shall begin each communication with a meter with verification of clock and meter ID to ensure date integrity.
- E. The Scan Transponder shall store downloaded meter values in flash memory and shall hold at least 30 days worth of records.
- F. All communication shall be direct between a Scan Transponder and each meter, and under the control of the Scan Transponder.
- G. Multiple Scan Transponders shall be connected by Data Link (RS-485).
- H. Where indicated on manufacturer's shop drawings, meter shall be connected to the Scan Transponder by Data Link (RS-485).
- I. Where indicated on manufacturer's shop drawings, provide a modem on a Scan Transponder for phone line connection to remote computer.
- J. Scan Transponder locations shall be approved by manufacture and installed per manufactures' guidelines. Upon request, manufacture shall provide a project specific design for Scan Transponder system.
- K. Owner shall provide a dedicated telephone line for remote access to the Transponder.

### **1.04 SOFTWARE**

- A. Quadlogic's IQ software or comparable system shall be capable of reading the system, downloading the metered data, and generating energy bills for electricity. (System must also be capable of compiling data from other utility meters such as BTU, gas, water and steam.)
- B. Quadlogic's IQ software or comparable system shall be capable of producing graphs and charts for load profiling including intervals ranging from 5 through 60 minute time periods.
- C. Data collected through IQ software or comparable must be able to be uploaded to spreadsheet programs for analysis such as Microsoft Excel.

## **PART 2 – EXECUTION**

### **2.01 INSTALLATION**

- A. A circuit breaker shall be provided at the metering location to allow safe access to metering components without powering down the entire panel. Where utilized, S-20 200A meters require tenant disconnect to be on the line side of the electric meter.
- B. All meters shall be installed to manufacture's installation instructions.

### **2.02 SYSTEM COMISSIONING AND START-UP**

- A. Contractor to provide third party testing of power metering system or "commissioning".

## DIVISION 16 ELECTRICAL SPECIFICATIONS

The owner's submetering service company or manufacturer's qualified service organization can provide third party testing. Testing shall be performed prior to tenant occupancy through the following process:

1. Have the installation contractor record the "cross reference" or the meter serial number (unique ID), meter point, to apartment/unit relationship.
2. Check for power to the meter.
3. Check the serial number inside the meter.
4. Open the panel so that all CT's are visible.
5. Verify the CT ratio and write up the cross reference information for the meter.

**NOTE TO SPECIFIER: ITEMS 6-8 BELOW APPLY TO RESIDENTIAL APPLICATIONS ONLY. DELETE IF METER/SYSTEM IS CONFIGURED FOR A COMMERCIAL APPLICATION.**

6. Confirm the "cross reference". This can be accomplished by having one technician turn on a known load in the respective unit on each phase (hair dryer, electric heater, electric stove, etc)
7. Have a second technician at the meter verify the meter's phase diagnostics for the assigned apartments/units. Confirm that there is a significant increase on the load for each phase of the meter point.
8. Once all phases have been checked and loads are still running, turn off the breaker serving the apartment and confirm that all loads in the apartment are disconnected. This completes the verification of the cross-reference list.

### B. Test Results:

1. Submit two draft copies of test results to the Owner for review.
2. After approval by the Owner, submit the test results in two final printed copies and one computer readable copy.

### C. Third party testing shall include testing of Power Line Carrier Communications between power meters and Transponders referred to as "start up".

1. Testing shall confirm that all power meters included in cross reference are properly communicating with the Transponders.
2. Testing shall confirm that remote connection system via phone line is complete.
3. Testing shall confirm that all Transponders on the RS-485 network are communicating properly.

END OF SECTION

Quadlogic Controls Corporation  
33-00 Northern Blvd.  
Long Island City, New York 11101



<b>Invoice Number</b>	<b>Bill Date</b>
8859583	04/11/17
	<b>Amount Due</b>
	\$139.81
<b>Security Code</b>	
<b>Building/Unit</b>	<b>Amount Paid</b>

Make Payments To:

Charges for		Security Code	Service Address		
Utility	Meter #	PreviousRead	CurrentRead	Multiplier	Usage
Electricity Service		11,473.887	12,025.555	1	551.668 - KWH

Electric Charges:	Start Date	End Date	Service Days	
Customer Charge	03/01/17	03/31/17	31	\$16.29
kWh Cost	03/01/17	03/31/17	31	\$101.37
Fuel Adjust	03/01/17	03/31/17	31	\$10.79
Utility Tax	03/01/17	03/31/17	31	\$5.34
Sales Tax	03/01/17	03/31/17	31	\$6.02
<b>Electric Charges Balance:</b>				<b>\$139.81</b>
<b>Current Invoice balance</b>				<b>\$139.81</b>

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