

LOCATION	
Asarese Matters	43128- 27440
Bud Bakewell	43128- 26913
Delevan Grider	43128- 27445
Friends to the Elderly	43128- 27361
George Arthur	43128- 26494
Gloria J. Parks	43128- 27360
J. B. Wiley Sports Complex	43128- 26911
North Buffalo Ice Rink	43128- 26912
Old First Ward	43128- 23092
Peter Machnica	43128- 27448
Schiller Park Senior	43128- 25029
Valley Community Association	43128- 23775
West Side Community Services	43128- 27362



Welcome peter@davidhomes.com! | Logout

Applications My Settings

Incentive Application 4328-27440

Application Date: 3/26/2012

Application Participants

Host Customer arc02@ch.ci.buffalo.ny.us
City of Buffalo (Dan Connors)
Asareese Matters / 40 Rees St / Buffalo, NY 14213 (Mailing, Physical)
Sector: Government
Payee Tax Status: Corporation
Tax ID:

Add Application Participant

Utility Company & Power Usage

National Grid Annual Usage: 166800 kWh

Installers, Inspectors, and Related Companies

Installer David Homes (Peter Appler, peter@davidhomes.com, 716-208-5331 H)
25 Hazelwood / Amherst, NY 14228

Selected Incentive

\$1.50 per Watt to 50kW (Unspecified)

System Equipment & Other Components : 10.080 kW DC-STC / 8.572 kW AC-PTC / 7.715 kW AC / 8.295 kW CSI-AC

Table with 2 columns: Component Name and Cost. Includes 42 Inverter, 42 PV Module, 1 System Costs, Total Cost: \$85,000.00, Incentive Amount: \$15,120.00

Application Paperwork & Tasks

Table with 3 columns: Task Name, Date, and Status. Lists tasks like Site Plan, Incentive Application Form, Photos of System Site, etc.



December 4, 2012

Attention: CITY OF BUFFALO
REES ST
BUFFALO, NY 14213

**Re: Niagara Mohawk, d/b/a National Grid, Standardized Contract For
Interconnection of New Distributed Generation Units of 2 MW or Less, to be
Operated in Parallel, Form K**

Dear CITY OF BUFFALO:

The application for your photovoltaic project at 0 REES ST BUFFALO NY 14213 was formally accepted on December 4, 2012. The Form K you submitted has been executed and a copy is attached for your file. A copy will also be sent to David Homes.

Please have your contractor forward a signed and dated Certification Letter (stating that the system has been tested in accordance with the requirements of the previously submitted inverter manufacturer's verification test procedure, with acceptable results) to our attention at the address shown below. Following review of this document and a site inspection (if deemed to be necessary), an order will be issued to initiate a meter change. A final interconnection authorization letter will follow the meter change order.

Also attached is a link to the current version of our Tariff, outlining the Standard Interconnection Requirements for On-Site Generators.

If you have any additional questions, please do not hesitate to contact us.

Sincerely,

Distributed Generation Services
Electric Load & DG

Enclosures

Xc: David Homes
File No.: CLA 25.1-13.5094



Department of Permit & Inspection Services

Byron W. Brown, Mayor

Brian Rely, Commissioner

ELECTRICAL INSPECTIONS

DATE: 1/14/13 RE: SOLAR PANELS

From: Electrical Inspections Department

REPORT OF ELECTRICAL INSPECTIONS

OWNERS NAME & ADDRESS

40 REESE ST.
PARKS & RECREATION

511 CITY HALL

BUFFALO, N.Y.

CONTRACTOR

GARDNER ELECTRIC

PERMIT NUMBER

184343

DATE OF INSPECTION

1/11/13

DISPOSITION

APPROVED

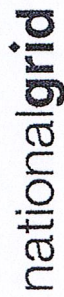
The electrical installation at the above noted address was found to be in compliance with the Ordinances of the City of Buffalo including the National Electrical Code. (copy of permit attached)

Very Truly Yours,

Permits and Inspection Services
Electrical Inspection Department

MICHAEL R. SULLIVAN
Electrical Inspector

Chief Electrical Inspector



January 22, 2013

Attention: CITY OF BUFFALO
REES ST
BUFFALO, NY 14213

**Re: Niagara Mohawk, d/b/a National Grid, Standardized Contract For
Interconnection of New Distributed Generation Units of 2 MW or Less, to be
Operated in Parallel, Form K**

Dear CITY OF BUFFALO:

The application for your photovoltaic project at 0 REES ST BUFFALO NY 14213 was formally accepted on January 22, 2013. Once your net meter has been installed, you are authorized to close your AC disconnect switch and produce power. In accordance with the NYS SIR, National Grid reserves the right to an on-site witness testing to be scheduled with the contractor and customer.

The Form K you submitted has been executed and a copy is attached for your file. A copy will also be sent to David Homes.

Also attached is a link to the current version of our Tariff, outlining the Standard Interconnection Requirements for On-Site Generators.

An order for your existing meter to be replaced with a net meter was issued on January 22, 2013. The meter replacement should be completed within ten business days.

If you have any additional questions, please do not hesitate to contact us.

Sincerely,

Distributed Generation Services
Electric Load & DG

National Grid
1125 Broadway
Albany, NY 12204

Enclosures

Xc: David Homes
File No.: CLA 25.1-13.5094



BYRON W. BROWN
MAYOR

CITY OF BUFFALO

DEPARTMENT OF
PUBLIC WORKS, PARKS & STREETS
Office of Planning & Design



STEVEN J. STEPNIAK
COMMISSIONER

October 9, 2011

Mr. Jason D. Mangione
NYSERDA
17 Columbia Circle
Albany, NY 12203

To Whom It May Concern:

The City of Buffalo does not require building permits for the installation of photovoltaic systems on existing building roofs. The City's only requirement for photovoltaic system installation is an electrical permit and electrical inspection after the system is complete. All of the following buildings will be submitted for incentives and do not require building permits.

- | | |
|---|------------------|
| Friends of the Elderly Community Center | 118 East Utica |
| Gloria Parks Community Center | 3242 Main St. |
| J. B. Wiley Stadium | 296 Best St. |
| Lafayette Ice Rink | 156 Tacoma St. |
| Machica Community Center | 1799 Clinton St. |
| West Side Community Center | 161 Vermont St. |
| Asatse Matters Community Center | 40 Reese St. |
| Bud Bakewell Ice Rink | 2687 Niagara St. |

Thank you.

Sincerely,

Daniel D. Connors
Project Manager

DDC:dig

Email this form to PVInvoices@nyserdera.ny.gov

Attachment C



NOTE: Please refer to Attachment H, Section 2.7 for naming of incentive requests. All document must be scanned as a single pdf.

PON 2112 SOLAR PV PROGRAM INCENTIVE REQUEST FORM

Rev. 8

Contractor Name David Homes Installer Name Peter Appler
NYSERDA Project No. 4328-17440 Customer Name City of Buffalo
Installation Address 40 Rees St. Buffalo NY 14213

Total Approved Incentive Amount \$ 15,120 If insurance will expire soon, attach current Certificate of Insurance.

Check one (if submitting for 100%, include ALL items under highlighted headings) 100% 75% 25%

NYSERDA PO# (click on link in PC "show contract details" to find PO#) 28971 Amount Requested \$ 3780
28972

ITEMS TO BE INCLUDED WITH 75% REQUEST

- Building permit or any and all permits as required by AHJ if not previously submitted; NYC projects need DOB work permit & electrical permit

List equipment delivered: Date of delivery 11/14/12 (owner's initials) [Signature]

Quantity	Manufacturer	Model	Owner's Initials
42	Enphase Energy	MZ15-60-2LL	[Signature]
42	Motech	MPV-240-M513	[Signature]

ITEMS TO BE INCLUDED WITH 25% REQUEST

- Sign-off/inter-connection letter from utility company or Acceptable Documentation as outlined in 2.7 of Pon 2112, Attachment H

Electrical inspection certificate; Installation Date 11/12 Utility Interconnection Date 1/22/13
I certify that all information provided in this form, including all attachments, are true and correct to the best of my knowledge. [Signature]
(installer's initials)

- Customer has received a copy of the Operation and Maintenance Manual.
- Eligible Installer/Affiliated Entity has inspected the system to verify it meets all codes and NYSEDA's Program requirements.
- Eligible Installer/Affiliated Entity has given instruction on the operation of the system to the customer.

Identify below all crew members who served in a primary role during installation of the system.

Sean Appler
John Greer

If this is an Expansion System, indicate previous Contract # _____ If a new meter has been installed, check

here and provide the meter reading from the initial system 2000

All installation and interconnection responsibilities have been completed by the Installer/Affiliated Entity "Contractor" as agreed to in the Customer Purchase Agreement. [Signature] (Must be initialed by Installer/Affiliated Entity "Contractor if this is a 25% or 100% request).

Customer Signature [Signature] Date 6/14/13

Contractor Signature [Signature] Date 6/12/13
If executed by Installer, Installer and Contractor certify that Installer is authorized by Contractor to do so.



Department of Permit & Inspection Services

Byron W. Brown, Mayor

Brian Rielly, Commissioner

ELECTRICAL INSPECTIONS

DATE: 1/11/13 RE: Service

From: Electrical Inspections Department

REPORT OF ELECTRICAL INSPECTIONS

OWNERS NAME & ADDRESS

1000 1st St
Buffalo, NY 14203

CONTRACTOR

PERMIT NUMBER

DATE OF INSPECTION

DISPOSITION

Electrician
184177
1/11/13
Approved

The electrical installation at the above noted address was found to be in compliance with the Ordinances of the City of Buffalo including the National Electrical Code. (copy of permit attached)

Very Truly Yours,

Permits and Inspection Services
Electrical Inspection Department

Brian Rielly
Electrical Inspector

Chief Electrical Inspector

Welcome peter@davidhomes.com! | [Logout](#)[Applications](#)[My Settings](#)Incentive Application **4328-26913**Application Date: **2/16/2012****Application Participants**

Host Customer arc07@ch.ci.buffalo.ny.us
 City of Buffalo - 2687 Niagara St (Dan Connors)
 2687 Niagara St / Buffalo, NY 14207 (Physical)
 65 Niagara St / Buffalo, NY 14202 (Mailing)
 Sector: NonProfit

Payee Tax Status: Corporation
 Tax ID:

[Add Application Participant](#)**Utility Company & Power Usage**

National Grid

Annual Usage: 574720 kWh

Installers, Inspectors, and Related Companies

Installer David Homes (Peter Appler, peter@davidhomes.com, 716-208-5331 H)
 25 Hazelwood / Amherst, NY 14228

Selected Incentive

\$1.75 per Watt (25kW max) (Unspecified)

System Equipment & Other Components : 25.200 kW DC-STC / 21.632 kW AC-PTC / 19.469 kW AC / 21.632 kW CSI-AC

105 Inverter - Enphase Energy 0.2 kW (Model M215-60-2LL-S2x)	\$32,025.00
105 PV Module - Motech Americas 240W (Model MTPVp-240-MS)	\$61,740.00
1 System Costs - Installation Costs Balance of System	\$74,168.00
1 System Costs - Installation Costs Labor Overhead	\$72,067.00
Total Cost:	\$240,000.00
Incentive Amount:	\$43,750.00

Application Paperwork & Tasks

Site Plan	02/17/2012	
Incentive Application Form (Attachment B of B-1)	02/17/2012	
Photos of System Site	02/17/2012	
Three-line Electrical Drawing	02/17/2012	
Shading Analysis Results	02/17/2012	
Utility bill which includes RPS payment and annual usage	02/17/2012	
Building Permit	11/15/2012	
Estimate of Annual Output	02/17/2012	
Customer Purchase Agreement, PPA, or Lease Agreement	02/17/2012	
Addendum (Attachment E or E-1)	02/17/2012	
Design Review	04/03/2012	
Action: Review Completed		04/03/2012
Clipboard Audit or Letter regarding Energy Star benchmarking tool	02/17/2012	
Equipment Delivery	11/01/2012	

Email this form to PVInvoices@nyserderda.ny.gov

Attachment C



NOTE: Please refer to Attachment H, Section 2.7 for naming of Incentive requests. All document must be scanned as a single pdf.

PON 2112 SOLAR PV PROGRAM INCENTIVE REQUEST FORM

Rev. 8

Contractor Name David Homes Installer Name Peter Appler

NYSERDA Project No. 4328 - 26913 Customer Name City of Buffalo

Installation Address 2687 Niagara St Buffalo 14207

Total Approved Incentive Amount \$ 43,750 If insurance will expire soon, attach current Certificate of Insurance.

Check one (if submitting for 100%, include ALL items under highlighted headings) 100% 75% 25%

NYSERDA PO# (click on link in PC "show contract details" to find PO#) 28314 Amount Requested \$ 10,937

ITEMS TO BE INCLUDED WITH 75% REQUEST

Building permit or any and all permits as required by AHJ if not previously submitted; NYC projects need DOB work permit & electrical permit

List equipment delivered:

Date of delivery 12/14/12 (owner's initials) [Signature]

	Quantity	Manufacturer	Model	Owner's Initials
Inverter(s)	105	Enphase Energy	M215-60-2LL	[Signature]
Modules	105	Motech	M+PV-240-MSC	[Signature]

ITEMS TO BE INCLUDED WITH 25% REQUEST

Sign-off/inter-connection letter from utility company or Acceptable Documentation as outlined in 2.7 of Pon 2112, Attachment H

Electrical inspection certificate; Installation Date 4/1/13 Utility Interconnection Date 5/24/13

I certify that all information provided in this form, including all attachments, are true and correct to the best of my knowledge. [Signature] (installer's initials)

- Customer has received a copy of the Operation and Maintenance Manual.
- Eligible Installer/Affiliated Entity has inspected the system to verify it meets all codes and NYSERDA's Program requirements.
- Eligible Installer/Affiliated Entity has given instruction on the operation of the system to the customer.

Identify below all crew members who served in a primary role during installation of the system.

Sean Appler
John Coerer

If this is an Expansion System, indicate previous Contract # _____ If a new meter has been installed, check here [Signature] and provide the meter reading from the initial system _____

All installation and interconnection responsibilities have been completed by the Installer/Affiliated Entity "Contractor" as agreed to in the Customer Purchase Agreement. [Signature] (Must be initialed by Installer/Affiliated Entity "Contractor" if this is a 25% or 100% request).

Customer Signature [Signature] Date 6/14/13

Contractor Signature [Signature] Date 6/12/13

If executed by Installer, Installer and Contractor certify that Installer is authorized by Contractor to do so.



Department of Permit & Inspection Services

Byron W. Brown, Mayor

Brian Rielly, Commissioner

ELECTRICAL INSPECTIONS

DATE: 5/22/13

RE: SOLAR PANEL

From: Electrical Inspections Department

REPORT OF ELECTRICAL INSPECTIONS

OWNERS NAME & ADDRESS

RIVERSIDE PARK (ICE RINK)

2505 NIAGARA

511 CITY HALL, BUFFALO

CONTRACTOR

GREEN

PERMIT NUMBER

190414

DATE OF INSPECTION

1/18/13

DISPOSITION

APPROVED

The electrical installation at the above noted address was found to be in compliance with the Ordinances of the City of Buffalo including the National Electrical Code. (copy of permit attached)

Very Truly Yours,

Permits and Inspection Services
Electrical Inspection Department

MICHAEL R SULLIVAN
Electrical Inspector

Chief Electrical Inspector

nationalgrid

May 24, 2013

Attention: CITY OF BUFFALO PARKS & RECREATION
C/O UTILITY ACCOUNTS .COM
PO BOX 1322
BUFFALO, NY 14205

**Re: Niagara Mohawk, d/b/a National Grid, Standardized Contract For
Interconnection of New Distributed Generation Units of 2 MW or Less, to be
Operated in Parallel, Form K**

Dear CITY OF BUFFALO PARKS & RECREATION:

The application for your photovoltaic project at 2687 NIAGARA ST BUFFALO NY 14207 was formally accepted on May 24, 2013. Once your net meter has been installed, you are authorized to close your AC disconnect switch and produce power. In accordance with the NYS SIR, National Grid reserves the right to an on-site witness testing to be scheduled with the contractor and customer.

The Form K you submitted has been executed and a copy is attached for your file. A copy will also be sent to David Homes.

Also attached is a link to the current version of our Tariff, outlining the Standard Interconnection Requirements for On-Site Generators.

An order for your existing meter to be replaced with a net meter was issued on May 24, 2013. The meter replacement should be completed within ten business days.

If you have any additional questions, please do not hesitate to contact us.

Sincerely,

Distributed Generation Services
Electric Load & DG

National Grid 1125 Broadway, Albany, NY 12204

Enclosures

Xc: David Homes
File No.: CLA 25.1-13.5093



BYRON W. BROWN
MAYOR

CITY OF BUFFALO
DEPARTMENT OF
PUBLIC WORKS, PARKS & STREETS
Office of Planning & Design



STEVEN J. STEPNIAK
COMMISSIONER

October 9, 2011

Mr. Jason D. Mangione
NYSERDA
17 Columbia Circle
Albany, NY 12203

To Whom It May Concern:

The City of Buffalo does not require building permits for the installation of photovoltaic systems on existing building roofs. The City's only requirement for photovoltaic system installation is an electrical permit and electrical inspection after the system is complete. All of the following buildings will be submitted for incentives and do not require building permits.

Friends of the Elderly Community Center	118 East Utica
Gloria Parks Community Center	3242 Main St.
J. B. Wiley Stadium	296 Best St.
Lafayette Ice Rink	156 Tacoma St.
Machnica Community Center	1799 Clinton St.
West Side Community Center	161 Vermont St.
Asarese Matters Community Center	40 Reese St.
Bud Bakewell Ice Rink	2687 Niagara St.

Thank you.

Sincerely,

Daniel D. Connors
Project Manager

DDC:dig



May 24, 2013

Attention: CITY OF BUFFALO PARKS & RECREATION
C/O UTILITY ACCOUNTS .COM
PO BOX 1322
BUFFALO, NY 14205

**Re: Niagara Mohawk, d/b/a National Grid, Standardized Contract For
Interconnection of New Distributed Generation Units of 2 MW or Less, to be
Operated in Parallel, Form K**

Dear CITY OF BUFFALO PARKS & RECREATION:

The application for your photovoltaic project at 2687 NIAGARA ST BUFFALO NY 14207 was formally accepted on May 24, 2013. Once your net meter has been installed, you are authorized to close your AC disconnect switch and produce power. In accordance with the NYS SIR, National Grid reserves the right to an on-site witness testing to be scheduled with the contractor and customer.

The Form K you submitted has been executed and a copy is attached for your file. A copy will also be sent to David Homes.

Also attached is a link to the current version of our Tariff, outlining the Standard Interconnection Requirements for On-Site Generators.

An order for your existing meter to be replaced with a net meter was issued on May 24, 2013. The meter replacement should be completed within ten business days.

If you have any additional questions, please do not hesitate to contact us.

Sincerely,

Distributed Generation Services
Electric Load & DG

National Grid 1125 Broadway, Albany, NY 12204

Enclosures

Xc: David Homes
File No.: CLA 25.1-13.5093

Email this form to PVInvoices@nyserdera.ny.gov

Attachment C



NOTE: Please refer to Attachment H, Section 2.7 for naming of incentive requests. All document must be scanned as a single pdf.

PON 2112 SOLAR PV PROGRAM INCENTIVE REQUEST FORM

Rev. 8

Contractor Name David Homes Installer Name Peter Appler

NYSERDA Project No. 4328 - 26912 Customer Name City of Buffalo

Installation Address 158 Taccuma Ave Buffalo NY 14208

Total Approved Incentive Amount \$ 43,750. If insurance will expire soon, attach current Certificate of Insurance.

Check one (if submitting for 100%, include ALL items under highlighted headings) 100% 75% 25%

NYSERDA PO# (click on link in PC "show contract details" to find PO#) 28316 Amount Requested \$ 10,937

ITEMS TO BE INCLUDED WITH 75% REQUEST

Building permit or any and all permits as required by AHJ if not previously submitted; NYC projects need DOB work permit & electrical permit

List equipment delivered: _____ Date of delivery 12/11/12 (owner's initials) [Signature]

	Quantity	Manufacturer	Model	Owner's Initials
Inverter(s)	105	Enphase Energy	M215-60-2LL	[Signature]
Modules	105	Motech	M+PV-240-M	[Signature]

ITEMS TO BE INCLUDED WITH 25% REQUEST

Sign-off/inter-connection letter from utility company or Acceptable Documentation as outlined in 2.7 of Pon 2112, Attachment H

Electrical inspection certificate; Installation Date 1/26/13 Utility Interconnection Date 5/24/13

I certify that all information provided in this form, including all attachments, are true and correct to the best of my knowledge. Peter (installer's initials)

- Customer has received a copy of the Operation and Maintenance Manual.
- Eligible Installer/Affiliated Entity has inspected the system to verify it meets all codes and NYSERDA's Program requirements.
- Eligible Installer/Affiliated Entity has given instruction on the operation of the system to the customer.

Identify below all crew members who served in a primary role during installation of the system.

Sean Appler _____

John Greer _____

If this is an Expansion System, indicate previous Contract # _____ If a new meter has been installed, check

here and provide the meter reading from the initial system 0000

All installation and interconnection responsibilities have been completed by the Installer/Affiliated Entity "Contractor" as agreed to in the Customer Purchase Agreement. (Must be initialed by Installer/Affiliated Entity "Contractor" if this is a 25% or 100% request).

Customer Signature [Signature] Date 6/14/13

Contractor Signature Peter Appler Date 6/12/13

If executed by Installer, Installer and Contractor certify that Installer is authorized by Contractor to do so.



May 24, 2013

Attention: CITY OF BUFFALO PARKS & RECREATION
C/O UTILITY ACCOUNTS.COM
PO BOX 1322
BUFFALO, NY 14205

**Re: Niagara Mohawk, d/b/a National Grid, Standardized Contract For
Interconnection of New Distributed Generation Units of 2 MW or Less, to be
Operated in Parallel, Form K**

Dear CITY OF BUFFALO PARKS & RECREATION:

The application for your photovoltaic project at 158 TACOMA AVE BUFFALO NY 14216 was formally accepted on May 24, 2013. Once your net meter has been installed, you are authorized to close your AC disconnect switch and produce power. In accordance with the NYS SIR, National Grid reserves the right to an on-site witness testing to be scheduled with the contractor and customer.

The Form K you submitted has been executed and a copy is attached for your file. A copy will also be sent to David Homes.

Also attached is a link to the current version of our Tariff, outlining the Standard Interconnection Requirements for On-Site Generators.

An order for your existing meter to be replaced with a net meter was issued on May 24, 2013. The meter replacement should be completed within ten business days.

If you have any additional questions, please do not hesitate to contact us.

Sincerely,

Distributed Generation Services
Electric Load & DG

National Grid 1125 Broadway, Albany, NY 12204

Enclosures

Xc: David Homes
File No.: CLA 25.1-13.5092

nationalgrid

December 4, 2012

Attention: CITY OF BUFFALO PARKS & RECREATION
C/O UTILITY ACCOUNTS.COM
PO BOX 1322
BUFFALO, NY 14205

**Re: Niagara Mohawk, d/b/a National Grid, Standardized Contract For
Interconnection of New Distributed Generation Units of 2 MW or Less, to be
Operated in Parallel, Form K**

Dear CITY OF BUFFALO PARKS & RECREATION:

The application for your photovoltaic project at 158 TACOMA AVE BUFFALO NY 14216 was formally accepted on December 4, 2012. The Form K you submitted has been executed and a copy is attached for your file. A copy will also be sent to David Homes.

Please have your contractor forward a signed and dated Certification Letter (stating that the system has been tested in accordance with the requirements of the previously submitted inverter manufacturer's verification test procedure, with acceptable results) to our attention at the address shown below. Following review of this document and a site inspection (if deemed to be necessary), an order will be issued to initiate a meter change. A final interconnection authorization letter will follow the meter change order.

Also attached is a link to the current version of our Tariff, outlining the Standard Interconnection Requirements for On-Site Generators.

If you have any additional questions, please do not hesitate to contact us.

Sincerely,

Distributed Generation Services
Electric Load & DG

Enclosures

Xc: David Homes
File No.: CLA 25.1-13.5092

nationalgrid

May 24, 2013

Attention: CITY OF BUFFALO PARKS & RECREATION
C/O UTILITY ACCOUNTS.COM
PO BOX 1322
BUFFALO, NY 14205

**Re: Niagara Mohawk, d/b/a National Grid, Standardized Contract For
Interconnection of New Distributed Generation Units of 2 MW or Less, to be
Operated in Parallel, Form K**

Dear CITY OF BUFFALO PARKS & RECREATION:

The application for your photovoltaic project at 158 TACOMA AVE BUFFALO NY 14216 was formally accepted on May 24, 2013. Once your net meter has been installed, you are authorized to close your AC disconnect switch and produce power. In accordance with the NYS SIR, National Grid reserves the right to an on-site witness testing to be scheduled with the contractor and customer.

The Form K you submitted has been executed and a copy is attached for your file. A copy will also be sent to David Homes.

Also attached is a link to the current version of our Tariff, outlining the Standard Interconnection Requirements for On-Site Generators.

An order for your existing meter to be replaced with a net meter was issued on May 24, 2013. The meter replacement should be completed within ten business days.

If you have any additional questions, please do not hesitate to contact us.

Sincerely,

Distributed Generation Services
Electric Load & DG

National Grid 1125 Broadway, Albany, NY 12204

Enclosures

Xc: David Homes
File No.: CLA 25.1-13.5092



Department of Permit & Inspection Services

Byron W. Brown, Mayor

Brian Rielly, Commissioner

ELECTRICAL INSPECTIONS

DATE: 5/22/13

RE: SOLAR PANEL'S

From: Electrical Inspections Department

REPORT OF ELECTRICAL INSPECTIONS

OWNERS NAME & ADDRESS

(156)
124 TACOMA (ICE RINK)

CITY HALL

BUFFALO, N.Y.

CONTRACTOR

GREEN

PERMIT NUMBER

192395

DATE OF INSPECTION

4/10/13

DISPOSITION

APPROVED

The electrical installation at the above noted address was found to be in compliance with the Ordinances of the City of Buffalo including the National Electrical Code. (copy of permit attached)

Very Truly Yours,

Permits and Inspection Services
Electrical Inspection Department

MICHAEL R SULLIVAN
Electrical Inspector

Chief Electrical Inspector



powerCLERK

powered by Clean Power Research

Welcome peter@davidhomes.com! | [Logout](#)

[Applications](#)

[My Settings](#)

Incentive Application 4328-27445

Application Date: 3/26/2012

Application Participants

Host Customer arc02@ch.ci.buffalo.ny.us

City of Buffalo - Delavan Moselle Community Center (Dan Connors)
Delavan Moselle Community Center / 877 E. Delavan St / Buffalo, NY 14215 (Physical)
City of Buffalo / 65 Niagara St / Buffalo, NY 14202 (Mailing)

Sector: Government

Payee

Tax Status: Corporation

Tax ID:

[Add Application Participant](#)

Utility Company & Power Usage

National Grid

Annual Usage: 208640 kWh

Installers, Inspectors, and Related Companies

Installer David Homes (Peter Appler, peter@davidhomes.com, 716-208-5331 H)
25 Hazelwood / Amherst, NY 14228

Selected Incentive

\$1.50 per Watt to 50kW (Unspecified)

System Equipment & Other Components : 9.120 kW DC-STC / 7.756 kW AC-PTC / 6.980 kW AC / 7.756 kW CSI-AC

38 Inverter - Enphase Energy 0.2 kW (Model M215-60-2LL-S2x)	\$11,388.00
38 PV Module - Motech Americas 240W (Model MTPVp-240-MSB)	\$26,052.00
1 System Costs - Installation Costs Balance of System	\$39,060.00
Total Cost:	\$76,500.00
Incentive Amount:	\$13,680.00

Application Paperwork & Tasks

Site Plan	04/04/2012	
Incentive Application Form (Attachment B or B-1)	04/04/2012	
Photos of System Site	04/04/2012	
Three-line Electrical Drawing	04/04/2012	
Shading Analysis Results	04/04/2012	
Utility bill which includes RPS payment and annual usage	04/04/2012	
Building Permit	12/04/2012	
Estimate of Annual Output	04/04/2012	
Customer Purchase Agreement, PPA, or Lease Agreement	04/04/2012	
Addendum (Attachment E or E-1)	04/04/2012	
Design Review	05/22/2012	
Action: Review Completed		05/22/2012
Clipboard Audit or Letter regarding Energy Star benchmarking tool	04/04/2012	
System Modification	11/24/2012	
Action: Modification Approved		12/03/2012
Equipment Delivery	11/02/2012	



NOTE: Please refer to Attachment H, Section 2.7 for naming of incentive requests. All document must be scanned as a single pdf.

PON 2112 SOLAR PV PROGRAM INCENTIVE REQUEST FORM

Rev. 8

Contractor Name David Homes Installer Name Peter Appler

NYSERDA Project No. 4328 - 27445 Customer Name City of Buffalo

Installation Address 877 E. Delaware Buffalo N.Y. 14202

Total Approved Incentive Amount \$ 13,680 If insurance will expire soon, attach current Certificate of Insurance.

Check one (if submitting for 100%, include ALL items under highlighted headings) 100% 75% 25%

NYSERDA PO# (click on link in PC "show contract details" to find PO#) 29210 Amount Requested \$ 3420

ITEMS TO BE INCLUDED WITH 75% REQUEST

Building permit or any and all permits as required by AHJ if not previously submitted; NYC projects need DOB work permit & electrical permit

List equipment delivered: _____ Date of delivery 11/12/12 (owner's initials) [Signature]

	Quantity	Manufacturer	Model	Owner's Initials
Inverter(s)	38	Euphase Energy	M215-60-2LL	[Signature]
Modules	38	Motech	MTPV-240-MSB	[Signature]

ITEMS TO BE INCLUDED WITH 25% REQUEST

Sign-off/inter-connection letter from utility company or Acceptable Documentation as outlined in 2.7 of Pon 2112, Attachment H

Electrical inspection certificate; Installation Date 11/1/12 Utility Interconnection Date 12/14/12

I certify that all information provided in this form, including all attachments, are true and correct to the best of my knowledge. [Signature]
(installer's initials)

- Customer has received a copy of the Operation and Maintenance Manual.
- Eligible Installer/Affiliated Entity has inspected the system to verify it meets all codes and NYSERDA's Program requirements.
- Eligible Installer/Affiliated Entity has given instruction on the operation of the system to the customer.

Identify below all crew members who served in a primary role during installation of the system.

Sevan Appler
John Greer

If this is an Expansion System, indicate previous Contract # _____ If a new meter has been installed, check here and provide the meter reading from the initial system 0

All installation and interconnection responsibilities have been completed by the Installer/Affiliated Entity "Contractor" as agreed to in the Customer Purchase Agreement. [Signature] (Must be initialed by Installer/Affiliated Entity "Contractor" if this is a 25% or 100% request).

Customer Signature [Signature] Date 6/13/13

Contractor Signature Peter Appler Date _____

If executed by Installer, Installer and Contractor certify that Installer is authorized by Contractor to do so.



December 4, 2012

Attention: CITY OF BUFFALO
881 E DELAVAN AVE
BUFFALO, NY 14215

**Re: Niagara Mohawk, d/b/a National Grid, Standardized Contract For
Interconnection of New Distributed Generation Units of 2 MW or Less, to be
Operated in Parallel, Form K**

Dear CITY OF BUFFALO:

The application for your photovoltaic project at 881 E DELAVAN AVE BUFFALO NY 14215 was formally accepted on December 4, 2012. The Form K you submitted has been executed and a copy is attached for your file. A copy will also be sent to David Homes.

Please have your contractor forward a signed and dated Certification Letter (stating that the system has been tested in accordance with the requirements of the previously submitted inverter manufacturer's verification test procedure, with acceptable results) to our attention at the address shown below. Following review of this document and a site inspection (if deemed to be necessary), an order will be issued to initiate a meter change. A final interconnection authorization letter will follow the meter change order.

Also attached is a link to the current version of our Tariff, outlining the Standard Interconnection Requirements for On-Site Generators.

If you have any additional questions, please do not hesitate to contact us.

Sincerely,

Distributed Generation Services
Electric Load & DG

Enclosures

Xc: David Homes
File No.: CLA 25.1-13.5090



Department of Permit & Inspection Services

Byron W. Brown, Mayor

Brian Rielly, Commissioner

ELECTRICAL INSPECTIONS

DATE: 12/2/12

RE: 5292 Falls

From: Electrical Inspections Department

REPORT OF ELECTRICAL INSPECTIONS

OWNERS NAME & ADDRESS

City of Buffalo (877-444-4444)

705 City Hall

Buffalo, NY

CONTRACTOR

City of Buffalo

PERMIT NUMBER

187311

DATE OF INSPECTION

12/2/12

DISPOSITION

Approved

The electrical installation at the above noted address was found to be in compliance with the Ordinances of the City of Buffalo including the National Electrical Code. (copy of permit attached)

Very Truly Yours,

Permits and Inspection Services
Electrical Inspection Department

Michelle A. Sullivan
Electrical Inspector

Chief Electrical Inspector

nationalgrid

December 19, 2012

Attention: CITY OF BUFFALO
881 E DELAVAN AVE
BUFFALO, NY 14215

**Re: Niagara Mohawk, d/b/a National Grid, Standardized Contract For
Interconnection of New Distributed Generation Units of 2 MW or Less, to be
Operated in Parallel, Form K**

Dear CITY OF BUFFALO:

The application for your photovoltaic project at 881 E DELAVAN AVE BUFFALO NY 14215 was formally accepted on December 19, 2012. Once your net meter has been installed, you are authorized to close your AC disconnect switch and produce power. In accordance with the NYS SIR, National Grid reserves the right to an on-site witness testing to be scheduled with the contractor and customer.

The Form K you submitted has been executed and a copy is attached for your file. A copy will also be sent to David Homes.

Also attached is a link to the current version of our Tariff, outlining the Standard Interconnection Requirements for On-Site Generators.

An order for your existing meter to be replaced with a net meter was issued on December 19, 2012. The meter replacement should be completed within ten business days.

If you have any additional questions, please do not hesitate to contact us.

Sincerely,

Distributed Generation Services
Electric Load & DG

Enclosures

Xc: David Homes
File No.: CLA 25.1-13.5090



BYRON W. BROWN
MAYOR

CITY OF BUFFALO
DEPARTMENT OF
PUBLIC WORKS, PARKS & STREETS
Office of Planning & Design



STEVEN J. STEPNIAK
COMMISSIONER

October 9, 2011

Mr. Jason D. Mangione
NYSERDA
17 Columbia Circle
Albany, NY 12203

To Whom It May Concern:

The City of Buffalo does not require building permits for the installation of photovoltaic systems on existing building roofs. The City's only requirement for photovoltaic system installation is an electrical permit and electrical inspection after the system is complete. All of the following buildings will be submitted for incentives and do not require building permits.

Friends of the Elderly Community Center
Gloria Parks Community Center
J. B. Wiley Stadium
Lafayette Ice Rink
Machnica Community Center
West Side Community Center
Asarese Matters Community Center
Bud Bakewell Ice Rink

118 East Utica
3242 Main St.
296 Best St.
156 Tacoma St.
1799 Clinton St.
161 Vermont St.
40 Reese St.
2687 Niagara St.

Thank you.

Sincerely,

Daniel D. Connors
Project Manager

DDC:dlg



powerCLERK®

powered by Clean Power Research

Applications

My Settings

Welcome peter@davidhomes.com! | Logout

Incentive Application 4328-27361

Application Date: 3/14/2012

Application ParticipantsHost Customer arc02@ch.ci.buffalo.ny.us

City of Buffalo - Friends of the Elderly (2) (Dan Connors)

Friends of the Elderly / 118 East Utica / Buffalo, NY 14209 (Mailing, Physical)

Sector: Government

Add Application Participant**Utility Company & Power Usage**

Central Hudson Gas & Electric

Annual Usage: 220000 kWh

Installers, Inspectors, and Related CompaniesInstaller David Homes (Peter Appler, peter@davidhomes.com, 716-208-5331 H)
25 Hazelwood / Amherst, NY 14228**Selected Incentive**

\$1.50 per Watt to 50kW (Unspecified)

System Equipment & Other Components : 5.170 kW DC-STC / 4.393 kW AC-PTC / 3.954 kW AC / 4.251 kW CSI-AC

22 Inverter - Enphase Energy 0.2 kW (Model M215-60-2LL-S2x)	\$6,402.00
22 PV Module - Motech Americas 235W (Model MTPVp-235-MSB)	\$14,701.50
1 System Costs - Installation Costs Balance of System	\$21,000.00
Total Cost:	\$42,103.50
Incentive Amount:	\$7,755.00

Application Paperwork & Tasks

Incentive Application Form (Attachment B or B-1)	03/23/2012	
Site Plan	03/27/2012	
Photos of System Site	03/27/2012	
Three-line Electrical Drawing	03/23/2012	
Shading Analysis Results	03/23/2012	
Utility bill which includes RPS payment and annual usage	03/27/2012	
Estimate of Annual Output	03/23/2012	
Customer Purchase Agreement, PPA, or Lease Agreement	03/23/2012	
Addendum (Attachment E or E-1)	03/23/2012	
Design Review	04/25/2012	
Action: Review Completed		04/25/2012
Clipboard Audit or Letter regarding Energy Star benchmarking tool	03/27/2012	

Payments

Total Payments:	\$0.00
------------------------	---------------

Attachment C

ny

NOTE: Please refer to Attachment H, Section 2.7 for naming of incentive requests. All document must be scanned as a single pdf.

PON 2112 SOLAR PV PROGRAM INCENTIVE REQUEST FORM

Rev. 6

Affiliated Entity "Contractor" Name David Homes Installer Name Peter Appler

NYSERDA Project No. 4328 - 27361 Customer Name City of Buffalo

Installation Address 118 E. Utica Buffalo NY 14209

Total Approved Incentive Amount \$ 7755.⁰⁰ If insurance will expire soon, attach current Certificate of Insurance.

Check one (if submitting for 100%, include ALL items under highlighted headings) 100% 75% 25%

NYSERDA PO# (click on link in PC "show contract details" to find PO#) 28628 Amount Requested \$ 7755

ITEMS TO BE INCLUDED WITH 75% REQUEST

Building permit or any and all permits as required by AHJ if not previously submitted; NYC projects need DOB work permit & electrical permit

List equipment delivered: _____ Date of delivery 2/1/12 (owner's initials) [Signature]

	Quantity	Manufacturer	Model	Owner's Initials
Inverter(s)	22	Enphase Energy	M215-60-2L-S2X	[Signature]
Modules	22	Motech America	MTPV-235-M5B	[Signature]

ITEMS TO BE INCLUDED WITH 25% REQUEST

Sign-off/inter-connection letter from utility company or Acceptable Documentation as outlined in 2.7 of Pon 2112, Attachment H

Electrical inspection certificate; Installation Date 12/13/12 Utility Interconnection Date 10/11/12

I certify that all information provided in this form, including all attachments, are true and correct to the best of my knowledge. [Signature] (installer's initials)

Customer has received a copy of the Operation and Maintenance Manual.

Eligible Installer/Affiliated Entity has inspected the system to verify it meets all codes and NYSERDA's Program requirements.

Eligible Installer/Affiliated Entity has given instruction on the operation of the system to the customer.

Identify below all crew members who served in a primary role during installation of the system.

Sean Appler John Greer
Peter Appler

If this is an Expansion System, indicate previous Contract # _____ If a new meter has been installed, check

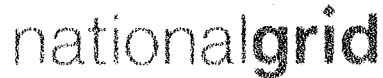
here and provide the meter reading from the initial system 000

All installation and interconnection responsibilities have been completed by the Installer/Affiliated Entity "Contractor" as agreed to in the Customer Purchase Agreement. [Signature] (Must be initialed by Installer/Affiliated Entity "Contractor" if this is a 25% or 100% request).

Customer Signature [Signature] Date 3/15/13

Installer/Affiliated Entity "Contractor" Signature Peter Appler Date 3/15/13

If executed by Installer, Installer and Affiliated Entity "Contractor" certify that Installer is authorized by Affiliated Entity "Contractor" to do so.



October 11, 2012

Attention: CITY OF BUFFALO
118 E UTICA ST
BUFFALO, NY 14209

**Re: Niagara Mohawk, d/b/a National Grid, Standardized Contract For
Interconnection of New Distributed Generation Units of 2 MW or Less, to be
Operated in Parallel, Form K**

Dear CITY OF BUFFALO:

The application for your photovoltaic project at 118 E UTICA ST BUFFALO NY 14209 was formally accepted on October 11, 2012. Once your net meter has been installed, you are authorized to close your AC disconnect switch and produce power. In accordance with the NYS SIR, National Grid reserves the right to an on-site witness testing to be scheduled with the contractor and customer.

The Form K you submitted has been executed and a copy is attached for your file. A copy will also be sent to David Homes.

Also attached is a link to the current version of our Tariff, outlining the Standard Interconnection Requirements for On-Site Generators.

An order for your existing meter to be replaced with a net meter was issued on October 11, 2012. The meter replacement should be completed within ten business days.

If you have any additional questions, please do not hesitate to contact us.

Sincerely,

Distributed Generation Services
Electric Load & DG

Enclosures

Xc: David Homes
File No.: CLA 25.1-13.4968



BYRON W. BROWN
MAYOR

CITY OF BUFFALO
DEPARTMENT OF
PUBLIC WORKS, PARKS & STREETS
Office of Planning & Design



STEVEN J. STEPNIAK
COMMISSIONER

October 9, 2011

Mr. Jason D. Mangione
NYSERDA
17 Columbia Circle
Albany, NY 12203

To Whom It May Concern:

The City of Buffalo does not require building permits for the installation of photovoltaic systems on existing building roofs. The City's only requirement for photovoltaic system installation is an electrical permit and electrical inspection after the system is complete. All of the following buildings will e submitted for incentives and do not require building permits.

Friends of the Elderly Community Center	118 East Utica
Gloria Parks Community Center	3242 Main St.
J. B. Wiley Stadium	296 Best St.
Lafayette Ice Rink	156 Tacoma St.
Machnica Community Center	1799 Clinton St.
West Side Community Center	161 Vermont St.
Asarese Matters Community Center	40 Reese St.
Bud Bakewell Ice Rink	2687 Niagara St.

Thank you.

Sincerely,

Daniel D. Connors
Project Manager

DDC:dlg



April 10, 2012

Attention: CITY OF BUFFALO
2056 GENESEE ST
BUFFALO, NY 14211

**Re: Niagara Mohawk, d/b/a National Grid, Standardized Contract For
Interconnection of New Distributed Generation Units of 2 MW or Less, to be
Operated in Parallel, Form K**

Dear CITY OF BUFFALO:

The application for your photovoltaic project at 2056 GENESEE ST BUFFALO NY 14211 was formally accepted on April 10, 2012. Once your net meter has been installed, you are authorized to close your AC disconnect switch and produce power. In accordance with the NYS SIR, National Grid reserves the right to an on-site witness testing to be scheduled with the contractor and customer.

The Form K you submitted has been executed and a copy is attached for your file. A copy will also be sent to David Homes.

Also attached is a link to the current version of our Tariff, outlining the Standard Interconnection Requirements for On-Site Generators.

An order for your existing meter to be replaced with a net meter was issued on April 10, 2012. The meter replacement should be completed within ten business days.

If you have any additional questions, please do not hesitate to contact us.

Sincerely,

Distributed Generation Services
Electric Load & DG

40 Sylvan Road
Waltham, MA 02451

Enclosures

Xc: David Homes
File No.: CLA 25.1-13.4406



powerCLERK[®]

powered by  Clean Power Research

Welcome peter@davidhomes.com! | [Logout](#)


[Applications](#)

[My Settings](#)

Incentive Application **4328-26494**

Application Date: **12/27/2011**

Application Participants

Host Customer  ARC02@ch.ci.buffalo.ny.us
 City of Buffalo (Dan Connors)
 2056 Genesee St / Buffalo, NY 14211 (Physical)
 65 Niagara St / Buffalo, NY 14202 (Mailing)
 Sector: Government

Payee
 Tax Status: Corporation
 Tax ID:

[Add Application Participant](#)

Utility Company & Power Usage

National Grid

Annual Usage: 102000 kWh

Installers, Inspectors, and Related Companies

Installer David Homes (Peter Appler, peter@davidhomes.com, 716-208-5331 H)
 25 Hazelwood / Amherst, NY 14228

Selected Incentive

\$1.75 per Watt to 50kW (Unspecified)

System Equipment & Other Components : 5.170 kW DC-STC / 4.332 kW AC-PTC / 3.899 kW AC / 0.000 kW CSI-AC

22 Inverter - Enphase Energy 0.2 kW (Model M215-60-2LL-S2x)	\$6,405.08
22 PV Module - Montech Solar 235W (Model MTS-235-M)	\$14,700.00
1 System Costs - Installation Costs Balance of System	\$21,000.00
Total Cost:	\$42,105.08
Incentive Amount:	\$9,048.00

Application Paperwork & Tasks

Site Plan	01/18/2012
Incentive Application Form (Attachment B or B-1)	01/18/2012
Photos of System Site	12/28/2011
Three-line Electrical Drawing	01/18/2012
Shading Analysis Results	01/18/2012
Utility bill which includes RPS payment and annual usage	01/18/2012
Estimate of Annual Output	01/18/2012
Customer Purchase Agreement, PPA, or Lease Agreement	01/18/2012
Addendum (Attachment E or E-1)	01/18/2012
Expected Installation	04/15/2012
Expected Interconnection	04/16/2012
Design Review	03/12/2012
Action: Review Completed	03/12/2012
Clipboard Audit or Letter regarding Energy Star benchmarking tool	01/18/2012



Department of Permit & Inspection Services

Byron W. Brown, Mayor

Brian Rielly, Commissioner

ELECTRICAL INSPECTIONS

DATE: 11/14/12

RE: SIGNAL PANELS

From: Electrical Inspections Department

REPORT OF ELECTRICAL INSPECTIONS

OWNERS NAME & ADDRESS

CITY OF BUFFALO

2041 COT. HALL

Buffalo, NY

CONTRACTOR

GREEN ELECTRIC

PERMIT NUMBER

187512

DATE OF INSPECTION

11/14/12

DISPOSITION

APPROVED

The electrical installation at the above noted address was found to be in compliance with the Ordinances of the City of Buffalo including the National Electrical Code. (copy of permit attached)

Very Truly Yours,

Permits and Inspection Services
Electrical Inspection Department

Michael R. Sullivan
Electrical Inspector

Chief Electrical Inspector



BYRON W. BROWN
MAYOR

CITY OF BUFFALO
DEPARTMENT OF
PUBLIC WORKS, PARKS & STREETS
Office of Planning & Design



STEVEN J. STEPNIAK
COMMISSIONER

October 9, 2011

Mr. Jason D. Mangione
NYSERDA
17 Columbia Circle
Albany, NY 12203

To Whom It May Concern:

The City of Buffalo does not require building permits for the installation of photovoltaic systems on existing building roofs. The City's only requirement for photovoltaic system installation is an electrical permit and electrical inspection after the system is complete. All of the following buildings will be submitted for incentives and do not require building permits.

Friends of the Elderly Community Center	118 East Utica
Gloria Parks Community Center	3242 Main St.
J. B. Wiley Stadium	296 Best St.
Lafayette Ice Rink	156 Tacoma St.
Machnica Community Center	1799 Clinton St.
West Side Community Center	161 Vermont St.
Asarese Matters Community Center	40 Reese St.
Bud Bakewell Ice Rink	2687 Niagara St.

Thank you.

Sincerely,

Daniel D. Connors
Project Manager

DDC:dlg

Welcome peter@davidhomes.com! | [Logout](#)[Applications](#)[My Settings](#)

Incentive Application 4328-27360

Application Date: 3/14/2012

Application Participants

Host Customer ARC02@CH.CI.BUFFALO.NY.US
 City of Buffalo - Gloria Parks (3) (Dan Connors)
 Gloria Parks / 3242 Main St. / Buffalo, NY 14214 (Mailing, Physical)
 Sector: Government

Payee Tax Status: Corporation
 Tax ID:

[Add Application Participant](#)**Utility Company & Power Usage**

Central Hudson Gas & Electric

Annual Usage: 395120 kWh

Installers, Inspectors, and Related Companies

Installer David Homes (Peter Appler, peter@davidhomes.com, 716-208-5331 H)
 25 Hazelwood / Amherst, NY 14228

Selected Incentive

\$1.50 per Watt to 50kW (Unspecified)

System Equipment & Other Components : 5.040 kW DC-STC / 4.286 kW AC-PTC / 3.857 kW AC / 4.147 kW CSI-AC

21 Inverter - Enphase Energy 0.2 kW (Model M215-60-2LL-S2x)	\$6,111.00
21 PV Module - Motech Americas 240W (Model MTPVp-240-MSB)	\$14,032.00
1 System Costs - Installation Costs Balance of System	\$21,000.00
Total Cost:	\$41,143.00
Incentive Amount:	\$7,560.00

Application Paperwork & Tasks

Incentive Application Form (Attachment B or B-1)	03/23/2012	
Site Plan	03/27/2012	
Photos of System Site	03/27/2012	
Three-line Electrical Drawing	03/27/2012	
Shading Analysis Results	03/27/2012	
Utility bill which includes RPS payment and annual usage	03/27/2012	
Interconnect Letter	12/04/2012	
Estimate of Annual Output	03/27/2012	
Customer Purchase Agreement, PPA, or Lease Agreement	03/27/2012	
Addendum (Attachment E or E-1)	03/27/2012	
Design Review	04/25/2012	
Action: Review Completed		04/25/2012
Clipboard Audit or Letter regarding Energy Star benchmarking tool	03/27/2012	
System Modification	11/24/2012	
Action: Modification Approved		12/03/2012
Equipment Delivery	10/01/2012	
Actual Interconnection	11/05/2012	



November 5, 2012

Attention: CITY OF BUFFALO
3242 MAIN ST
BUFFALO, NY 14214

**Re: Niagara Mohawk, d/b/a National Grid, Standardized Contract For
Interconnection of New Distributed Generation Units of 2 MW or Less, to be
Operated in Parallel, Form K**

Dear CITY OF BUFFALO:

The application for your photovoltaic project at 3242 MAIN ST BUFFALO NY 14214 was formally accepted on November 5, 2012. Once your net meter has been installed, you are authorized to close your AC disconnect switch and produce power. In accordance with the NYS SIR, National Grid reserves the right to an on-site witness testing to be scheduled with the contractor and customer.

The Form K you submitted has been executed and a copy is attached for your file. A copy will also be sent to David Homes.

Also attached is a link to the current version of our Tariff, outlining the Standard Interconnection Requirements for On-Site Generators.

An order for your existing meter to be replaced with a net meter was issued on November 5, 2012. The meter replacement should be completed within ten business days.

If you have any additional questions, please do not hesitate to contact us.

Sincerely,

Distributed Generation Services
Electric Load & DG

Enclosures


Xc: David Homes
File No.: CLA 25.1-13.4969

Welcome peter@davidhomes.com! | [Logout](#)[Applications](#)[My Settings](#)

Incentive Application 4328-26912

Application Date: 2/16/2012

Application Participants

Host Customer  arc07@ch.ci.buffalo.ny.us
 City of Buffalo - 158 Tacoma Ave (Dan Connors)
 158 Tacoma Ave / Buffalo, NY 14216 (Physical)
 65 Niagara St / Buffalo, NY 14202 (Mailing)
 Sector: NonProfit

Payee
 Tax Status: Corporation
 Tax ID:

[Add Application Participant](#)**Utility Company & Power Usage**

National Grid

Annual Usage: 986800 kWh

Installers, Inspectors, and Related Companies

Installer David Homes (Peter Appler, peter@davidhomes.com, 716-208-5331 H)
 25 Hazelwood / Amherst, NY 14228

Selected Incentive

\$1.75 per Watt (25kW max) (Unspecified)

System Equipment & Other Components : 25.200 kW DC-STC / 21.430 kW AC-PTC / 19.287 kW AC / 21.430 kW CSI-AC

105 Inverter - Enphase Energy 0.2 kW (Model M215-60-2LL-S2x)	\$32,025.00
105 PV Module - Motech Americas 240W (Model MTPVp-240-M)	\$61,740.00
1 System Costs - Installation Costs Balance of System	\$74,168.00
1 System Costs - Installation Costs Labor Overhead	\$72,067.00
Total Cost:	\$240,000.00
Incentive Amount:	\$43,750.00

Application Paperwork & Tasks

Site Plan	02/17/2012	
Incentive Application Form (Attachment B or B-1)	02/17/2012	
Photos of System Site	02/17/2012	
Three-line Electrical Drawing	02/17/2012	
Shading Analysis Results	02/17/2012	
Utility bill which includes RPS payment and annual usage	02/17/2012	
Building Permit	11/16/2012	
Estimate of Annual Output	02/17/2012	
Customer Purchase Agreement, PPA, or Lease Agreement	02/17/2012	
Addendum (Attachment E or E-1)	02/17/2012	
Design Review	03/29/2012	
Action: Review Completed		03/29/2012
Clipboard Audit or Letter regarding Energy Star benchmarking tool	02/17/2012	
Equipment Delivery	11/02/2012	



powerCLERK®

powered by Clean Power Research

Welcome peter@davidhomes.com! | [Logout](#)

[Applications](#)

[My Settings](#)

Incentive Application **4328-23092**

Application Date: **6/15/2011**

Application Participants

Host Customer ARC02@ch.ci.buffalo.ny.us
 City of Buffalo (Dan Connors)
 65 Niagara St / Buffalo, NY 14202 (Mailing)
 Old 1st Ward Community Center / 62 Republic / Buffalo, NY 14204 (Physical)
 Sector: Commercial

Payee Tax Status: Corporation
 Tax ID:

[Add Application Participant](#)

Utility Company & Power Usage

National Grid Annual Usage: 164000 kWh

Installers, Inspectors, and Related Companies

Installer David Homes (Peter Appler, peter@davidhomes.com, 716-208-5331 H)
 25 Hazelwood / Amherst, NY 14228

Inspector Cadmus (Shawn Shaw, shawn.shaw@cadmusgroup.com)
 410 Great Road, B6 / Littleton, MA 01460

Selected Incentive

\$1.75 per Watt to 50kW (Unspecified)

System Equipment & Other Components : 7.755 kW DC-STC / 6.584 kW AC-PTC / 5.925 kW AC / 0.000 kW CSI-AC

33 Inverter - Enphase Energy 0.2 kW (Model M190-72-208-Sxx (-NA))	\$9,075.00
33 PV Module - Motech Americas 235W (Model MTPVp-235-MS)	\$24,024.00
1 System Costs - Installation Costs Balance of System	\$34,901.00
Total Cost:	\$68,000.00
Incentive Amount:	\$13,571.00

Application Paperwork & Tasks

Site Plan	06/15/2011	
Incentive Application Form (Attachment B or B-1)	06/15/2011	
Photos of System Site	06/15/2011	
Three-line Electrical Drawing	06/15/2011	
Shading Analysis Results	06/15/2011	
Utility bill which includes RPS payment and annual usage	06/15/2011	
Estimate of Annual Output	06/15/2011	
Customer Purchase Agreement, PPA, or Lease Agreement	06/15/2011	
Addendum (Attachment E or E-1)	06/15/2011	
Design Review	07/21/2011	
Action: Review Completed		07/21/2011
Clipboard Audit or Letter regarding Energy Star benchmarking tool	06/15/2011	
Equipment Delivery	08/30/2011	
Inspection	06/25/2012	
Action: Reinspection Completed (Pass)		08/10/2012



November 30, 2011

Attention: CITY OF BUFFALO
62 REPUBLIC ST
BUFFALO NY 14204

**Re: Niagara Mohawk, d/b/a National Grid, Standardized Contract For
Interconnection of New Distributed Generation Units of 2 MW or Less, to be
Operated in Parallel, Form K**

Dear CITY OF BUFFALO:

The application for your photovoltaic project at 62 REPUBLIC ST BUFFALO NY 14204 was formally accepted on November 30, 2011. Once your net meter has been installed, you are authorized to close your AC disconnect switch and produce power.

In accordance with the NYS SIR, National Grid reserves the right to an on-site witness testing to be scheduled with the contractor and customer.

The Form K you submitted has been executed and a copy is attached for your file. A copy will also be sent to David Homes.

Also attached is a link to the current version of our Tariff, outlining the Standard Interconnection Requirements for On-Site Generators.

An order for your existing meter to be replaced with a net meter was issued on November 30, 2011. The meter replacement should be completed within ten business days.

If you have any additional questions, please do not hesitate to contact us.

Sincerely,

Distributed Generation Services
Electric Load & DG

Enclosures

Xc: David Homes
File No.: CLA 25.1-13.4080



Department of Permit & Inspection Services

Byron W. Brown, Mayor

Brian Rielly, Commissioner

ELECTRICAL INSPECTIONS

DATE: 5/22/13

RE: SOLAR PANELS

From: Electrical Inspections Department

REPORT OF ELECTRICAL INSPECTIONS

OWNERS NAME & ADDRESS

PARKS & RECREATION
1799 CLINTON
511 CITY HALL, BUFFALO

CONTRACTOR

GREEN

PERMIT NUMBER

190411

DATE OF INSPECTION

1/18/13

DISPOSITION

APPROVED

The electrical installation at the above noted address was found to be in compliance with the Ordinances of the City of Buffalo including the National Electrical Code. (copy of permit attached)

Very Truly Yours,

Permits and Inspection Services
Electrical Inspection Department

MICHAEL R. SULLIVAN
Electrical Inspector

Chief Electrical Inspector

NOTE: Please refer to Attachment H, Section 2.7 for naming of incentive requests. All document must be scanned as a single pdf.

PON 2112 SOLAR PV PROGRAM INCENTIVE REQUEST FORM

Rev. 8

Contractor Name Davio Homes Installer Name Peter Appler

NYSERDA Project No. 4328 - 27448 Customer Name City of Buffalo

Installation Address 1799 Clinton St Buffalo NY 14206

Total Approved Incentive Amount \$ 10,800 If insurance will expire soon, attach current Certificate of Insurance.

Check one (if submitting for 100%, include ALL items under highlighted headings) 100% 75% 25%

NYSERDA PO# (click on link in PC "show contract details" to find PO#) 29076 Amount Requested \$ 2700

ITEMS TO BE INCLUDED WITH 75% REQUEST

Building permit or any and all permits as required by AHJ if not previously submitted; NYC projects need DOB work permit & electrical permit

List equipment delivered: _____ Date of delivery 12/16/12 (owner's initials) [Signature]

	Quantity	Manufacturer	Model	Owner's Initials
Inverter(s)	30	Enphase Energy	M215-60-2LL	[Signature]
Modules	30	Motech	M+PV-240-M6B	[Signature]

ITEMS TO BE INCLUDED WITH 25% REQUEST

Sign-off/inter-connection letter from utility company or Acceptable Documentation as outlined in 2.7 of Pon 2112, Attachment H

Electrical inspection certificate; Installation Date 1/16/13 Utility Interconnection Date 5/24/13

I certify that all information provided in this form, including all attachments, are true and correct to the best of my knowledge. Peter
(installer's initials)

- Customer has received a copy of the Operation and Maintenance Manual.
- Eligible Installer/Affiliated Entity has inspected the system to verify it meets all codes and NYSERDA's Program requirements.
- Eligible Installer/Affiliated Entity has given instruction on the operation of the system to the customer.

Identify below all crew members who served in a primary role during installation of the system.

Sean Appler _____

John Greer _____

If this is an Expansion System, indicate previous Contract # _____ If a new meter has been installed, check

here _____ and provide the meter reading from the initial system _____

All installation and interconnection responsibilities have been completed by the Installer/Affiliated Entity "Contractor" as agreed to in the Customer Purchase Agreement. (Must be initialed by Installer/Affiliated Entity "Contractor" if this is a 25% or 100% request).

Customer Signature [Signature] Date 6/14/13

Contractor Signature Peter Appler Date 6/12/13

If executed by installer, installer and contractor certify that installer is authorized by contractor to do so.



May 24, 2013

Attention: CITY OF BUFFALO
1799 CLINTON ST,
MACHNICA COMM CNTR
BUFFALO, NY 14206

**Re: Niagara Mohawk, d/b/a National Grid, Standardized Contract For
Interconnection of New Distributed Generation Units of 2 MW or Less, to be
Operated in Parallel, Form K**

Dear CITY OF BUFFALO:

The application for your photovoltaic project at 1799 CLINTON ST, MACHNICA COMM CNTR BUFFALO NY 142 was formally accepted on May 24, 2013. Once your net meter has been installed, you are authorized to close your AC disconnect switch and produce power. In accordance with the NYS SIR, National Grid reserves the right to an on-site witness testing to be scheduled with the contractor and customer.

The Form K you submitted has been executed and a copy is attached for your file. A copy will also be sent to David Homes.

Also attached is a link to the current version of our Tariff, outlining the Standard Interconnection Requirements for On-Site Generators.

An order for your existing meter to be replaced with a net meter was issued on May 24, 2013. The meter replacement should be completed within ten business days.

If you have any additional questions, please do not hesitate to contact us.

Sincerely,

Distributed Generation Services
Electric Load & DG

National Grid 1125 Broadway, Albany, NY 12204

Enclosures

Xc: David Homes
File No.: CLA 25.1-13.5095



Welcome peter@davidhomes.com! | Logout

Applications

My Settings

Incentive Application 4328-23775

Application Date: 8/17/2011

Application Participants

Host Customer ARC02@ch.ci.buffalo.ny.us
 City of Buffalo (Dan Connors)
 Carmichael Center / 83 Leddy / Buffalo, NY 14210 (Physical)
 65 Niagara ST / Buffalo, NY 14202 (Mailing)
 Sector: Government

Payee Tax Status: Corporation
 Tax ID:

Add Application Participant

Utility Company & Power Usage

National Grid

Annual Usage: 322000 kWh

Installers, Inspectors, and Related Companies

Installer David Homes (Peter Appler, peter@davidhomes.com, 716-208-5331 H)
 25 Hazelwood / Amherst, NY 14228

Inspector Cadmus (Shawn Shaw, shawn.shaw@cadmusgroup.com)
 410 Great Road, B6 / Littleton, MA 01460

Selected Incentive

\$1.75 per Watt to 50kW (Unspecified)

System Equipment & Other Components : 15.510 kW DC-STC / 12.995 kW AC-PTC / 11.696 kW AC / 0.000 kW CSI-AC

66 Inverter - Enphase Energy 0.2 kW (Model M215-60-208-S2x)	\$20,130.00
66 PV Module - Montech Solar 235W (Model MTS-235-M)	\$38,808.00
2 System Costs - Installation Costs Balance of System	\$21,736.00
2 System Costs - Installation Costs Labor Overhead	\$46,620.00
1 System Costs - Installation Costs Permitting Fees	\$200.00
Total Cost:	\$127,494.00
Incentive Amount:	\$27,143.00

Application Paperwork & Tasks

Site Plan	08/16/2011
Incentive Application Form (Attachment B or B-1)	08/16/2011
Photos of System Site	08/17/2011
Three-line Electrical Drawing	08/16/2011
Shading Analysis Results	08/17/2011
Utility bill which includes RPS payment and annual usage	08/16/2011
Building Permit	02/23/2012
Estimate of Annual Output	08/17/2011
Customer Purchase Agreement, PPA, or Lease Agreement	08/16/2011
Addendum (Attachment E or E-1)	08/16/2011
Design Review	09/07/2011
Action: Review Completed	09/07/2011

OK



January 26, 2012

Attention: CITY OF BUFFALO
83 LEDDY ST
BUFFALO, NY 14210

**Re: Niagara Mohawk, d/b/a National Grid, Standardized Contract For
Interconnection of New Distributed Generation Units of 2 MW or Less, to be
Operated in Parallel, Form K**

Dear CITY OF BUFFALO:

The application for your photovoltaic project at 83 LEDDY ST BUFFALO NY 14210 was formally accepted on January 26, 2012. The Form K you submitted has been executed and a copy is attached for your file. A copy will also be sent to .

Please have your contractor forward a signed and dated Certification Letter (stating that the system has been tested in accordance with the requirements of the previously submitted inverter manufacturer's verification test procedure, with acceptable results) to our attention at the address shown below. Following review of this document and a site inspection (if deemed to be necessary), an order will be issued to initiate a meter change. A final interconnection authorization letter will follow the meter change order.

Also attached is a link to the current version of our Tariff, outlining the Standard Interconnection Requirements for On-Site Generators.

If you have any additional questions, please do not hesitate to contact us.

Sincerely,

Distributed Generation Services
Electric Load & DG

Enclosures

Xc:

File No.: CLA 25.1-13.4355

Welcome peter@davidhomes.com! | [Logout](#)[Applications](#)[My Settings](#)

Incentive Application 4328-27362

Application Date: 3/14/2012

Application ParticipantsHost Customer arc02@ch.ci.buffalo.ny.us

City of Buffalo - West Side Community Center (1) (Dan Connors)
 West Side Community Center / 161 Vermont St. / Buffalo, NY 14213 (Physical)
 65 Niagara / Buffalo, NY 14202 (Mailing)

Sector: Government

Payee

Tax Status: Corporation

Tax ID:

[Add Application Participant](#)**Utility Company & Power Usage**

National Grid

Annual Usage: 140000 kWh

Installers, Inspectors, and Related Companies

Installer David Homes (Peter Appler, peter@davidhomes.com, 716-208-5331 H)
 25 Hazelwood / Amherst, NY 14228

Selected Incentive

\$1.50 per Watt to 50kW (Unspecified)

System Equipment & Other Components : 5.040 kW DC-STC / 4.226 kW AC-PTC / 3.803 kW AC / 4.226 kW CSI-AC

21 Inverter - Enphase Energy 0.2 kW (Model M215-60-2LL-S2x)	\$6,111.00
21 PV Module - Montech Solar 240W (Model MTS-240-M)	\$14,032.00
1 System Costs - Installation Costs Balance of System	\$21,000.00
Total Cost:	\$41,143.00
Incentive Amount:	\$7,560.00

Application Paperwork & Tasks

Site Plan	03/27/2012	
Incentive Application Form: (Attachment B or B-1)	03/27/2012	
Photos of System Site	03/27/2012	
Three-line Electrical Drawing	03/27/2012	
Shading Analysis Results	03/27/2012	
Utility bill which includes RPS payment and annual usage	03/27/2012	
Building Permit	11/16/2012	
Estimate of Annual Output	03/20/2012	
Customer Purchase Agreement, PPA, or Lease Agreement	03/27/2012	
Addendum (Attachment E or E-1)	03/27/2012	
Design Review	04/25/2012	
Action: Review Completed		04/25/2012
Clipboard Audit or Letter regarding Energy Star benchmarking tool	03/27/2012	
System Modification	11/24/2012	
Action: Modification Approved		12/03/2012



December 4, 2012

Attention: CITY OF BUFFALO
161 VERMONT ST, *
BUFFALO, NY 14213

**Re: Niagara Mohawk, d/b/a National Grid, Standardized Contract For
Interconnection of New Distributed Generation Units of 2 MW or Less, to be
Operated in Parallel, Form K**

Dear CITY OF BUFFALO:

The application for your photovoltaic project at 161 VERMONT ST, * BUFFALO NY 14213 was formally accepted on December 4, 2012. The Form K you submitted has been executed and a copy is attached for your file. A copy will also be sent to David Homes.

Please have your contractor forward a signed and dated Certification Letter (stating that the system has been tested in accordance with the requirements of the previously submitted inverter manufacturer's verification test procedure, with acceptable results) to our attention at the address shown below. Following review of this document and a site inspection (if deemed to be necessary), an order will be issued to initiate a meter change. A final interconnection authorization letter will follow the meter change order.

Also attached is a link to the current version of our Tariff, outlining the Standard Interconnection Requirements for On-Site Generators.

If you have any additional questions, please do not hesitate to contact us.

Sincerely,

Distributed Generation Services
Electric Load & DG

Enclosures

Xc: David Homes
File No.: CLA 25.1-13.5091



December 19, 2012

Attention: CITY OF BUFFALO
161 VERMONT ST, *
BUFFALO, NY 14213

**Re: Niagara Mohawk, d/b/a National Grid, Standardized Contract For
Interconnection of New Distributed Generation Units of 2 MW or Less, to be
Operated in Parallel, Form K**

Dear CITY OF BUFFALO:

The application for your photovoltaic project at 161 VERMONT ST, * BUFFALO NY 14213 was formally accepted on December 19, 2012. Once your net meter has been installed, you are authorized to close your AC disconnect switch and produce power. In accordance with the NYS SIR, National Grid reserves the right to an on-site witness testing to be scheduled with the contractor and customer.

The Form K you submitted has been executed and a copy is attached for your file. A copy will also be sent to David Homes.

Also attached is a link to the current version of our Tariff, outlining the Standard Interconnection Requirements for On-Site Generators.

An order for your existing meter to be replaced with a net meter was issued on December 19, 2012. The meter replacement should be completed within ten business days.

If you have any additional questions, please do not hesitate to contact us.

Sincerely,

Distributed Generation Services
Electric Load & DG

Enclosures

Xc: David Homes
File No.: CLA 25.1-13.5091

Email this form to PVinvoices@nyserdera.ny.gov

Attachment C



NOTE: Please refer to Attachment H, Section 2.7 for naming of incentive requests. All document must be scanned as a single pdf.

PON 2112 SOLAR PV PROGRAM INCENTIVE REQUEST FORM

Rev. 8

Contractor Name David Homes Installer Name Peter Appler

NYSERDA Project No. 9328-27362 Customer Name City of Buffalo

Installation Address 161 Vermont, SC. Buffalo N.Y. 14213

Total Approved Incentive Amount \$ 7755 If insurance will expire soon, attach current Certificate of Insurance.

Check one (if submitting for 100%, include ALL items under highlighted headings) 100% 75% 25%

NYSERDA PO# (click on link in PC "show contract details" to find PO#) 21 28960 Amount Requested \$ 2085 ¹⁹⁸⁹

ITEMS TO BE INCLUDED WITH 75% REQUEST

Building permit or any and all permits as required by AHJ if not previously submitted; NYC projects need DOB work permit & electrical permit

List equipment delivered: _____ Date of delivery 11/10/12 (owner's initials) [Signature]

	Quantity	Manufacturer	Model	Owner's Initials
Inverter(s)	21	Enphase Energy	M215-60-2LL	[Signature]
Modules	21	Motech	M+PV-240-M517	[Signature]

ITEMS TO BE INCLUDED WITH 25% REQUEST

Sign-off/inter-connection letter from utility company or Acceptable Documentation as outlined in 2.7 of Pon 2112, Attachment H

Electrical inspection certificate; Installation Date 11/10/12 Utility Interconnection Date 12/19/12

I certify that all information provided in this form, including all attachments, are true and correct to the best of my knowledge. [Signature] (installer's initials)

- Customer has received a copy of the Operation and Maintenance Manual.
- Eligible Installer/Affiliated Entity has inspected the system to verify it meets all codes and NYSERDA's Program requirements.
- Eligible Installer/Affiliated Entity has given instruction on the operation of the system to the customer.

Identify below all crew members who served in a primary role during installation of the system.

Sean Appler
John Coerer

If this is an Expansion System, indicate previous Contract # _____ If a new meter has been installed, check here and provide the meter reading from the initial system 0

All installation and interconnection responsibilities have been completed by the Installer/Affiliated Entity "Contractor" as agreed to in the Customer Purchase Agreement. [Signature] (Must be initiated by Installer/Affiliated Entity "Contractor" if this is a 25% or 100% request).

Customer Signature [Signature] Date 6/14/13

Contractor Signature [Signature] Date 6/12/13

If executed by Installer, Installer and Contractor certify that Installer is authorized by Contractor to do so.



Department of Permit & Inspection Services

Byron W. Brown, Mayor

Brian Rielly, Commissioner

ELECTRICAL INSPECTIONS

DATE: 12/13/12

RE: 50070 Permits

From: Electrical Inspections Department

REPORT OF ELECTRICAL INSPECTIONS

OWNERS NAME & ADDRESS

City of Buffalo (141 Woodmont)

1212 City Hall

Buffalo, N.Y.

CONTRACTOR

Electrical Services

PERMIT NUMBER

189342

DATE OF INSPECTION

12/13/12

DISPOSITION

Approved

The electrical installation at the above noted address was found to be in compliance with the Ordinances of the City of Buffalo including the National Electrical Code. (copy of permit attached)

Very Truly Yours,

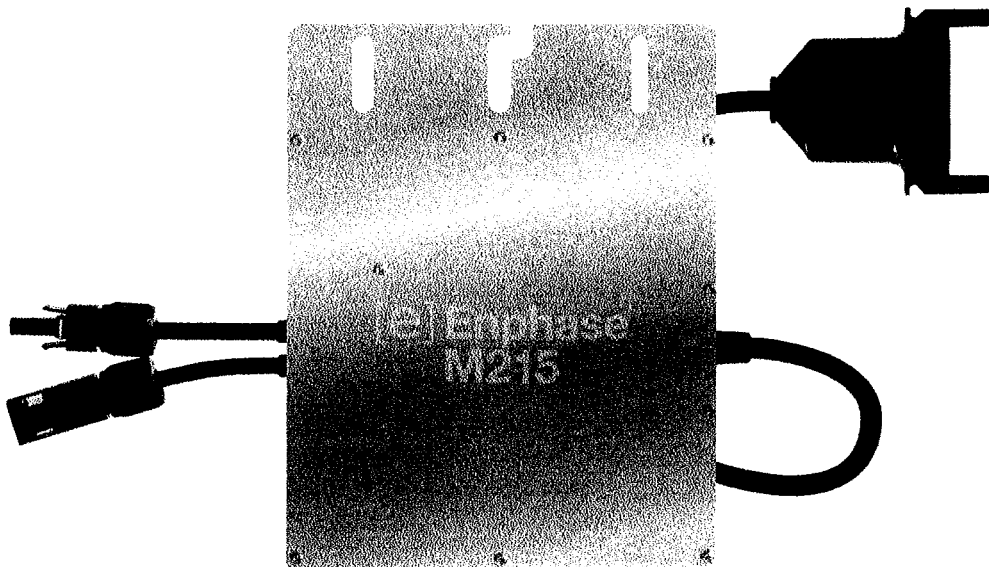
Permits and Inspection Services
Electrical Inspection Department

Matthew L. Sullivan
Electrical Inspector

Chief Electrical Inspector

Enphase® Microinverters

Enphase® M215



The Enphase® M215 Microinverter with integrated ground delivers increased energy harvest and reduces design and installation complexity with its all-AC approach. With the advanced M215, the DC circuit is isolated and insulated from ground, so **no Ground Electrode Conductor (GEC) is required for the microinverter**. This further simplifies installation, enhances safety, and saves on labor and materials costs.

The Enphase M215 integrates seamlessly with the Engage® Cable, the Envoy® Communications Gateway™, and Enlighten®, Enphase's monitoring and analysis software.

PRODUCTIVE

- Maximizes energy production
- Minimizes impact of shading, dust, and debris
- No single point of system failure

SIMPLE

- No GEC needed for microinverter
- No DC design or string calculation required
- Easy installation with Engage Cable

RELIABLE

- More than 1 million hours of testing and millions of units shipped
- Industry-leading warranty, up to 25 years

M215 — MICROINVERTER TECHNICAL DATA

Input Data (DC)

Recommended input power (STC)	190 - 260W
Maximum input DC voltage	45V
Peak power tracking voltage	22V - 36V
Operating range	16V - 36V
Min./Max. start voltage	26.4V/45V
Max. DC short circuit current	15A
Max. input current	10.5A

Output Data (AC)

	@208V _{AC}	@240V _{AC}
Maximum output power	215W	215W
Nominal output current	1.0A (arms at nominal duration)	0.9A (arms at nominal duration)
Nominal voltage/range	208V/183-229V	240V/211-264V
Nominal frequency/range	60.0/59.3-60.5 Hz	60.0/59.3-60.5 Hz
Extended frequency range	60.0/59.2-60.6 Hz	60.0/59.2-60.6 Hz
Power Factor	>0.95	>0.95
Maximum units per 20A branch circuit	25 (three phase)	17 (single phase)
Maximum output fault current	1.05 Arms, over 3 cycles; 25.2 A _{peak} , 174ms duration	

Efficiency

CEC weighted efficiency	96.0%
Peak inverter efficiency	96.3%
Static MPPT efficiency (weighted, reference EN50530)	99.6%
Dynamic MPPT efficiency (fast irradiation changes, reference EN50530)	99.3%
Night time power consumption	46mW

Mechanical Data

Ambient temperature range	-40°C to + 65°C
Operating temperature range (internal)	-40°C to + 85°C
Dimensions (WxHxD)	17.3 cm x 16.4 cm x 2.5 cm (6.8" x 6.45" x 1.0")*
Weight	1.6 kg (3.5 lbs)
Cooling	Natural convection - No fans
Enclosure environmental rating	Outdoor - NEMA 6

* without mounting bracket

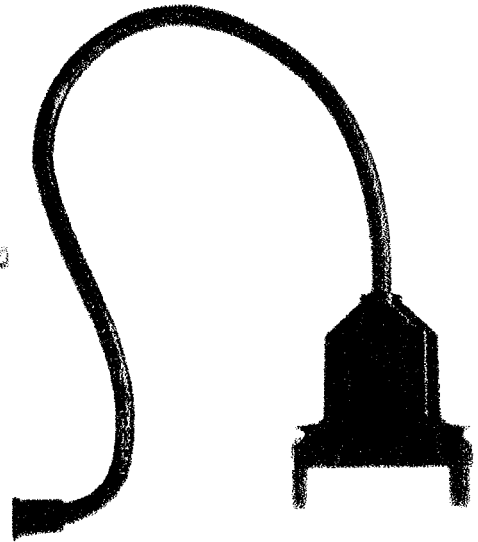
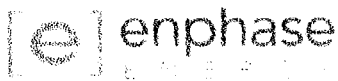
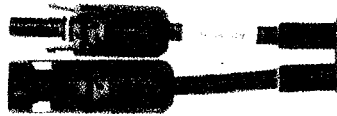
Features

Compatibility	Pairs with most 60-cell PV modules
Communication	Power line
Warranty	25-year limited warranty
Monitoring	Free lifetime monitoring via Enlighten software
Compliance	UL1741/IEEE1547, FCC Part 15 Class B CAN/CSA-C22.2 NO. 0-M91, 0.4-04, and 107.1-01

Enphase Energy, Inc.

201 1st Street
Petaluma, CA 94952
Phone: 877-797-4743
Fax: 707-763-0784

142-00010 Rev 02



The Enphase Energy Microinverter System improves energy harvest, increases reliability, and dramatically simplifies design, installation and management of solar power systems.

The Enphase System includes the microinverter, the Envoy Communications Gateway, and Enlighten, Enphase's monitoring and analysis software.

PRODUCTIVE

- Maximum energy production
- Resilient to dust, debris and shading
- Performance monitoring per module

RELIABLE

- System availability greater than 99.8%
- No single point of system failure

SMART

- Quick and simple design, installation and management
- 24/7 monitoring and analysis

SAFE

- Low voltage DC
- Reduced fire risk



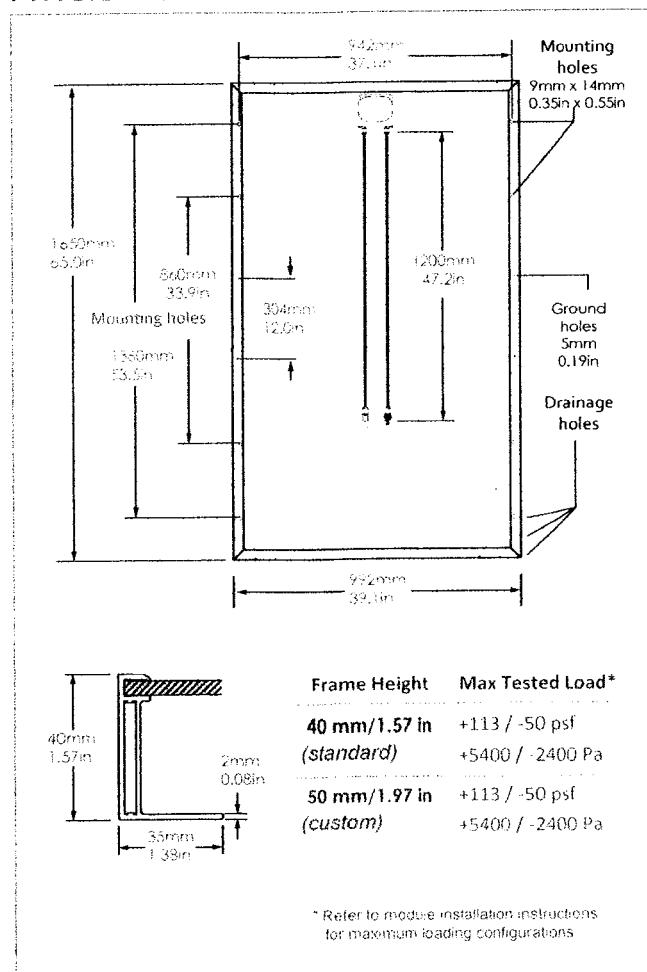
Enphase® M215 Microinverter // DATA

INPUT DATA (DC)		M215-60-2LL-S22-IG / S23-IG / S24-IG	
Recommended input power (STC)	190 - 270 W		
Maximum input DC voltage	48 V		
Peak power tracking voltage	27 V - 39 V		
Operating range	16 V - 48 V		
Min/Max start voltage	22 V / 48 V		
Max DC short circuit current	15 A		
OUTPUT DATA (AC)		@208 VAC	@240 VAC
Peak output power	225 W	225 W	
Rated (continuous) output power	215 W	215 W	
Nominal output current	1.03 A (A rms at nominal duration)	0.9 A (A rms at nominal duration)	
Nominal voltage/range	208 V / 183-229 V	240 V / 211-264 V	
Nominal frequency/range	60.0 / 57-61 Hz	60.0 / 57-61 Hz	
Extended frequency range*	57-62.5 Hz	57-62.5 Hz	
Power factor	>0.95	>0.95	
Maximum units per 20 A branch circuit	25 (three phase)	17 (single phase)	
Maximum output fault current	850 mA rms for 6 cycles	850 mA rms for 6 cycles	
EFFICIENCY			
CEC weighted efficiency, 240 VAC	96.5%		
CEC weighted efficiency, 208 VAC	96.5%		
Peak inverter efficiency	96.5%		
Static MPPT efficiency (weighted, reference EN50530)	99.4 %		
Night time power consumption	65 mW max		
MECHANICAL DATA			
Ambient temperature range	-40°C to +65°C		
Dimensions (WxHxD)	171 mm x 173 mm x 30 mm (without mounting bracket)		
Weight	1.6 kg (3.4 lbs)		
Cooling	Natural convection - No fans		
Enclosure environmental rating	Outdoor - NEMA 6		
FEATURES			
Compatibility	Compatible with 60-cell PV modules.		
Communication	Power line		
Integrated ground	The DC circuit meets the requirements for ungrounded PV arrays in NEC 690.35. Equipment ground is provided in the Engage Cable. No additional GEC or ground is required. Ground fault protection (GFP) is integrated into the microinverter.		
Monitoring	Enlighten Manager and MyEnlighten monitoring options		
Compliance	UL1741/IEEE1547, FCC Part 15 Class B, CAN/CSA-C22.2 NO. 0-M91, 0.4-04, and 107.1-01		

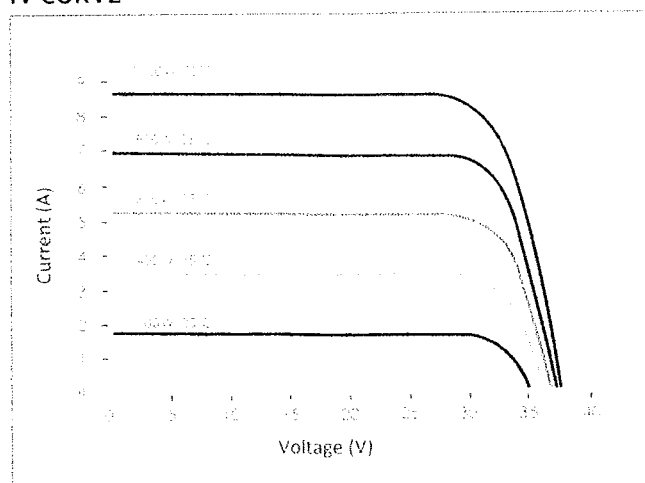
* Frequency ranges can be extended beyond nominal if required by the utility

To learn more about Enphase Microinverter technology, visit enphase.com



PHYSICAL CHARACTERISTICS

PHYSICAL DESIGN PROPERTIES

Weight	43.6 lb [19.3 kg]
Glass	3.2mm low iron tempered glass with anti-reflective coating
Hailstone Impact Resistance	1" @ 50 mph [25 mm @ 80 kph]
Junction Box	IP65/IP67 rated UL 600V/IEC 1000V Certified
Output Cables	4.0mm ² Universal PV Wire, 1200mm [47.2in]
Connectors	MC4 Compatible

IV CURVE

ELECTRICAL PERFORMANCE
IM60C3-250
IM60C3-255
IM60C3-260

Test Conditions	STC	NOCT	STC	NOCT	STC	NOCT
Max. Power Voltage V _{mpp} (V)	30.93	28.37	30.78	28.06	31.06	28.37
Max. Power Current I _{mpp} (A)	8.08	6.48	8.29	6.68	8.37	6.74
Open Circuit Voltage V _{oc} (V)	37.68	34.97	37.54	34.73	37.76	34.93
Short Circuit Current I _{sc} (A)	8.63	6.99	8.85	7.17	8.93	7.23

ELECTRICAL PERFORMANCE PARAMETERS

I _{sc} Temperature Coefficient	α (%/°C)	+0.07 ±0.02	Max. Series Fuse	15A
V _{oc} Temperature Coefficient	β (%/°C)	-0.34 ±0.01	Max. System Voltage	IEC 1000V UL 600V/ 1000V
P _{max} Temperature Coefficient	γ (%/°C)	-0.46 ±0.02	Nominal Operating Cell Temp. (NOCT)	46°C ± 2°C
Efficiency Reduction at 200W/m ² , 25°C		<5%	Limiting Reverse Current (I _r)	9.0A

IV parameters are rated at Standard Test Conditions (Irradiance of 1000 W/m², AM 1.5, cell temperature 25°C). All measurements are guaranteed at the laminate leads. NOCT is measured at 800 W/m², 20°C ambient, and 1 m/s windspeed. Specifications are subject to change without notice. Motech reserves the rights of final interpretation and revision on this datasheet.

DGC004998 Rev. A July 2014



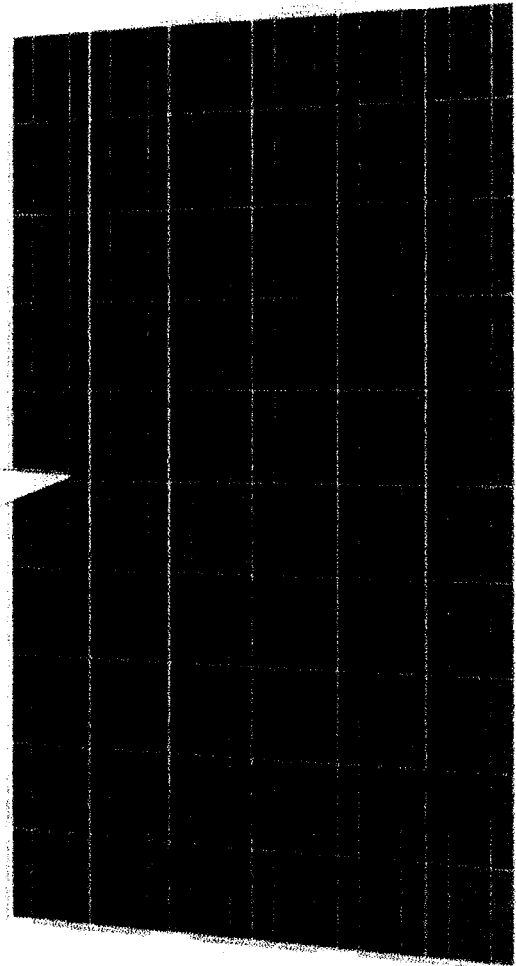
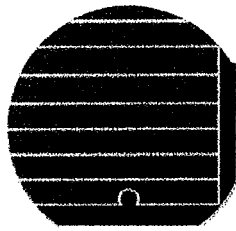
60 Series Photovoltaic Modules

Peak Power: 230-245Wp

Features

- 60 MOTTECH polysilicon solar cells connected in series
- Designed for 600V or 1000V applications
- For commercial or residential grid-tied applications
- Output power tolerance of -3% +5%
- Robust anodized aluminum frame and tempered glass
- Type junction box, easy-click connectors, and cable
- Global manufacturing and world-class quality

POWERED BY
MOTTECH
SOLAR CELLS

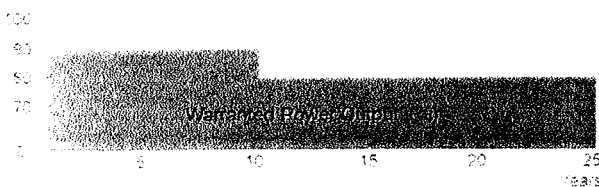


Quality, Reliability, and Yield

Motech modules are powered by some of the highest performance and most reliable silicon cells in the solar industry. Motech modules are engineered and tested to the highest possible quality standards and are recognized throughout the world for their ability to deliver lifetime performance and, most importantly, maximized kWh yield.

25-Year Extended Warranty*

- 10-year warranty at 90%, 25-year warranty at 80%
- 5-year warranty on materials and workmanship



Certifications & Standards*



IEC 61215
IEC 61730



UL 1703
CEC listed



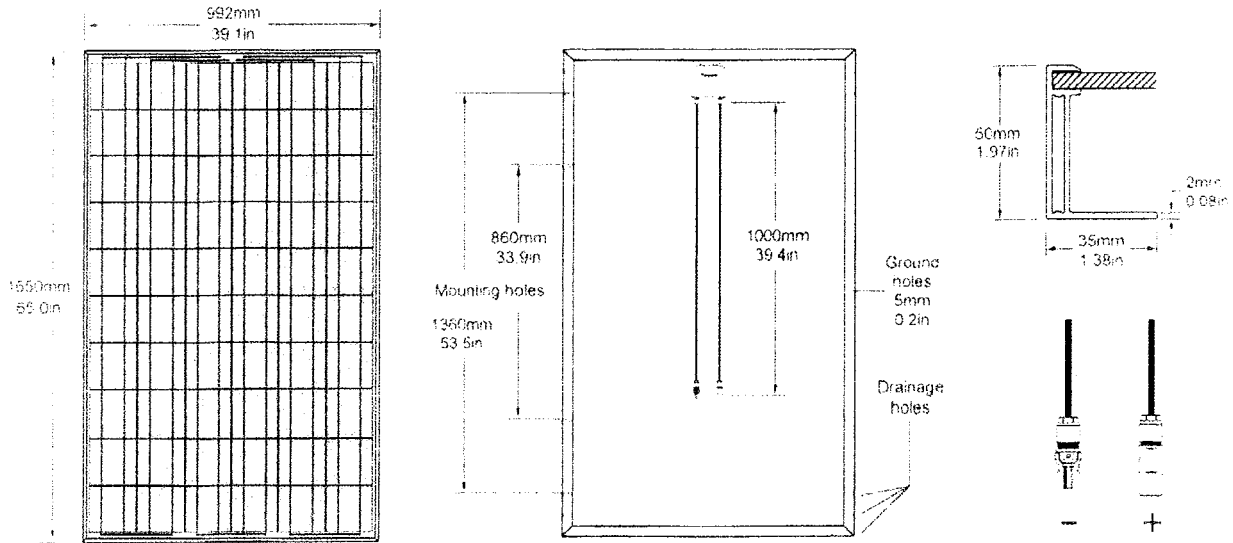
Application Class A
Safety Class II

* Please refer to our website for certification and warranty details.

Monocrystalline Photovoltaic Modules



Physical Characteristics

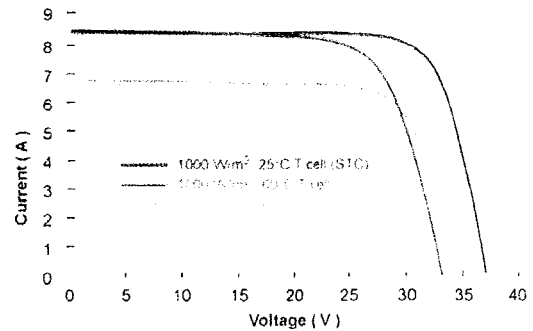


Physical Design Properties

Weight	43.7 lb [19.8 kg]
Maximum Tested Load	±50 psf [2400 Pa] / +113 csf [5400 Pa] *
Hailstone Impact Resistance	1" @ 50 mph [25 mm @ 80 kph]
Junction Box	IP65 rated
Output Cables	4.0mm ² Universal PV Wire, 1000mm [39.4in] Tyco SOLARLOK [®] Connectors

*Refer to module installation instructions for maximum loading configurations

IV Curve



Electrical Performance

Peak Power	P_{max} (W)	230	235	240	245
Max. Power Voltage	V_{mpp} (V)	30.5	30.7	31.0	31.2
Max. Power Current	I_{mpp} (A)	7.6	7.7	7.8	7.9
Open Circuit Voltage	V_{oc} (V)	36.7	37.0	37.1	37.4
Short Circuit Current	I_{sc} (A)	8.1	8.2	8.3	8.4

Electrical Performance Parameters

Short Circuit Temp. Coefficient	$\alpha(I_{sc})$	0.04%/°C	Max. Series Fuse	15A
Open Circuit Voltage Coefficient	$\beta(V_{oc})$	-0.32%/°C	Max. System Voltage	600V/1000V
Max. Power Temp. Coefficient	$\gamma(P_{max})$	-0.45%/°C	Normal Operating Cell Temp. (NOCT)	45°C ± 2°C
Efficiency Reduction at 200W/m ² , 25°C		<5%	Limiting Reverse Current (I _r)	8.4A

†† Parameters are rated at Standard Test Conditions (Irradiance of 1000 W/m², AM 1.5G, cell temperature 25°C). All measurements are guaranteed at the laminate ends. NOCT is measured at 500 W/m², 20 deg. C ambient, and 1 m/s windspeed. Specifications are subject to change without notice.

MAQMS TD.015 Rev 2, September 2010

MOTEC INDUSTRIES, INC.

www.motech.com/iv

MOTEC Americas LLC, a division of MOTEC Industries, Inc.
231 Lake Drive, Newark, Delaware 19702 USA
Tel: +1-302-451-7500 | E-mail: modules@motech-americas.com

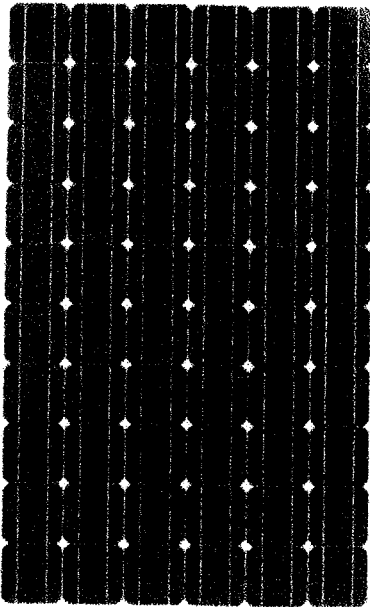
SHARP®

solar electricity

240 WATT

MULTI-PURPOSE MODULE

NEC 2008 Compliant



NU-Q240F2

**MULTI-PURPOSE 240 WATT
MODULE FROM THE WORLD'S
TRUSTED SOURCE FOR SOLAR.**

Using breakthrough technology, made possible by nearly 50 years of proprietary research and development, Sharp's NU-Q240F2 solar module incorporates an advanced cell surface texturing process to increase light absorption and improve efficiency. Common applications include commercial and residential grid-tied roof systems as well as ground mounted arrays. Designed to withstand many harsh operating conditions, this module offers high power output per square foot of solar array.

Available in either 600W or 720W configurations, this module is a great choice for commercial applications. It offers an outstanding thermal and electrical performance, meeting the needs of your project.

ENGINEERING EXCELLENCE

High module efficiency for an outstanding balance of size and weight to power and performance.

DURABLE

Tempered glass, EVA lamination and weatherproof backskin provide long-life and enhanced cell performance.

RELIABLE

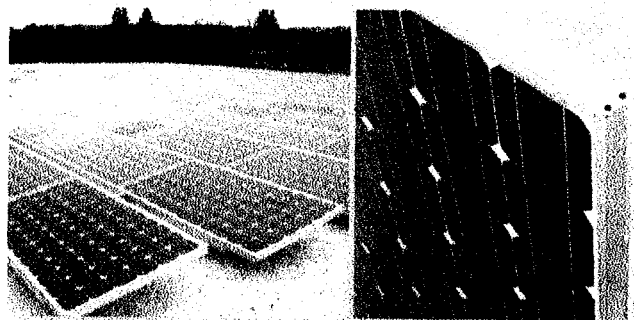
25-year limited warranty on power output.

HIGH PERFORMANCE

This module uses an advanced solar cell surface texturing process to increase light absorption and improve efficiency.

INNOVATIVE

156 mm pseudo-square monocrystalline solar cells provide high power output. Ideal for large commercial rooftops where space is a premium.



The NU-Q240F2 offers industry-leading performance for a variety of applications.

Interval-Frame Technology

SHARP: THE NAME TO TRUST

When you choose Sharp, you get more than well-engineered products. You also get Sharp's proven reliability, outstanding customer service and the assurance of our 25-year limited warranty on power output. A global leader in solar electricity, Sharp powers more homes and businesses than any other solar manufacturer worldwide.

BECOME POWERFUL

240 WATT

NU-Q240F2

NEC 2008 Compliant
Module output cables: 12 AWG PV Wire

ELECTRICAL CHARACTERISTICS

Maximum Power (P _{max}) ¹	240 W
Tolerance of P _{max}	+10%/-5%
Type of Cell ²	Monocrystalline silicon
Cell Configuration	60 in series
Open Circuit Voltage (V _{oc})	37.4 V
Maximum Power Voltage (V _{pm})	30.1 V
Short Circuit Current (I _{sc})	8.65 A
Maximum Power Current (I _{pm})	7.98 A
Module Efficiency (%)	14.7%
Maximum System (DC) Voltage	600 V
Series Fuse Rating	15 A
NOCT	47.5°C
Temperature Coefficient (P _{max})	-0.485%/°C
Temperature Coefficient (V _{oc})	-0.351%/°C
Temperature Coefficient (I _{sc})	0.0533%/°C

¹ Irradiation of 1kW/m² (1 sun) at spectral distribution of AM1.5 (1.517W/m² global spectral irradiance) at a cell temperature of 25°C.

MECHANICAL CHARACTERISTICS

Dimensions (A x B x C below)	39.1" x 64.6" x 1.8"/994 x 1640 x 45 mm
Cable Length (G)	43.5"/1100 mm
Output Interconnect Cable	12 AWG with SMK Locking Connector
Weight	41.9 lbs / 19.0 kg
Max Load	50 psf (2400 Pascals)
Operating Temperature (cell)	-40 to 194°F / -40 to 90°C

¹ PV Wire per UL Subject 4703

QUALIFICATIONS

UL Listed	UL 1703
Fire Rating	Class C



WARRANTY

25-year limited warranty on power output
Contact Sharp for complete warranty information

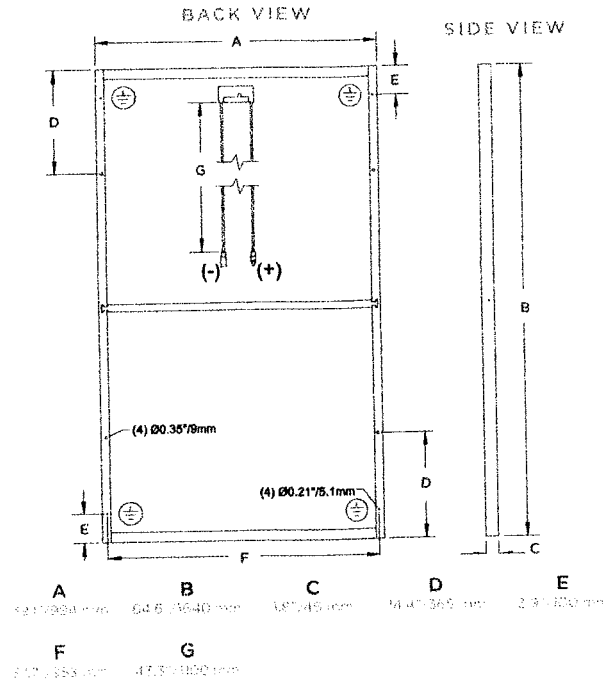
1. All dimensions and specifications are subject to change without notice.
2. Sharp is a registered trademark of Sharp Corporation. All other trademarks are property of their respective owners. Contact Sharp to obtain the latest product manuals before using any sharp device. Cover on the Solar Installation by SHARP Solar.



SHARP®

SHARP ELECTRONICS CORPORATION
5901 Bolsa Avenue, Huntington Beach, CA 92647
1-800-SOLAR-06 • Email: sharpsolar@sharpusa.com
www.sharpusa.com/solar

DIMENSIONS



Contact Sharp for tolerance specifications.

"BUY AMERICAN"

Sharp solar modules are manufactured in the United States and Japan, and qualify as "American" goods under the "Buy American" clause of the American Recovery and Reinvestment Act (ARRA).