AGENDA

1. CALL TO ORDER
2. ROLL CALL
3. ELECTION OF OFFICERS
4. APPROVAL OF JULY 24, 2019 MINUTES
5. REGULAR BUSINESS
   Deliberations will be held at the end of each case after public comment has been closed. No public comment is allowed during deliberations.

   CASE No  HPC 19-09
   (Continued from 7-24-19 hearing)

   PUBLIC HEARING on the request of Jonathan Thomas and Jennifer Replogle, to obtain a Certificate of Appropriateness to allow for the installation of roof mounted solar panels for the property located at 1602 W. Moss Avenue (Parcel Identification No. 18-08-176-003), Peoria, Illinois (Council District 2).

6. UNFINISHED BUSINESS
   Discussion of Chapter 16 Historic Preservation Code – Designation Procedure
   Discussion on creation of Pictorial Architectural Index

7. CITIZENS’ OPPORTUNITY TO ADDRESS THE COMMISSION

8. ADJOURNMENT

Inquiries: Community Development Department, (309) 494-8600 or kweick@peoriagov.org
If you plan on speaking, please complete a Blue Speaker Form.

For each case the following sequence will apply:

1. Chairperson proceeds with swearing in procedures
2. Chairperson announces the case
3. Staff enters case into the record
   a. Staff presents the case
   b. Staff answers questions from the Commission
4. Petitioner presents case and answers questions from the Commission
5. Chairperson opens the meeting to the public
6. Public comments – Chairperson may ask for response/input from staff and petitioner
7. Petitioner presents closing statements
8. Public testimony is closed (No further public comment)
9. Commission deliberates and may consult staff
10. Commission prepares findings, if applicable
11. Commission votes

All comments and questions must be directed to the Commission.
The regularly scheduled meeting for the Historic Preservation Commission Meeting was held on Wednesday, July 24, 2019, at 8:30 A.M., City Hall, 419 Fulton Street, Room 400 with proper notice having been posted.

**ROLL CALL**

The following Historic Preservation Commission Commissioners were present: Marisa Farrell, Marsha Burdette, Jan Krouse, Michael Maloof, and Geoff Smith- 5. Absent: - Lesley Matuszak, David Stotz -2

Staff Present: Kerilyn Weick, Megan Nguyen, Trina Bonds.

**ELECTION OF OFFICERS**

Commissioner Smith requested the vote for chairperson be discussed at the next regularly scheduled hearing as the current co-chair was not present.

Commissioner Maloof moved to elect Jan Krouse as chairperson pro tem; seconded by Commissioner Smith.

The motion was APPROVED by roll call vote 5 to 0.

Yeas: Farrell, Burdette, Krouse, Maloof, Smith –5
Nays: None.

**MINUTES**

Commissioner Smith moved to approve the minutes of the regularly scheduled meeting held on June 26, 2019; seconded by Commissioner Maloof.

The motion was approved viva voce vote 5 to 0.

**SWEARING IN OF SPEAKERS**

Staff member, Megan Nguyen, swore in the public.

**REGULAR BUSINESS**

**CASE NO. HPC 19-08**

Public Hearing on the request of Miles McKelvey, to obtain a Certificate of Appropriateness to allow for the replacement of windows, door, roof, and siding for the property located at 1311 W. Moss Avenue (Parcel Identification No. 18-08-132-027), Peoria, Illinois (Council District 2).

Urban Planner, Kerilyn Weick, Community Development Department, read Case No. HPC 19-08 into the record and presented the request as outlined in the memo.

Petitioner, Miles McKelvey, summarized the scope of work to complete repairs to the dwelling. In response to commissioners, Mr. McKelvey clarified the scope would use matching paint colors, requires replacing main door glass, attic story windows, and side windows in like style and color. Mr. McKelvey shared with the commission a picture of the dwelling pre-fire and explained the scope includes restoration to the mission style side windows.

Commissioner Maloof complemented the project.

With no interest from the public, Chairperson pro tem Krouse closed the hearing to public testimony.

**Motion:**

Commissioner Maloof made a motion to approve the request; seconded by Commissioner Smith.

**Discussion**

Chairperson pro tem Krouse read the Findings of Fact for a Certificate of Appropriateness.

The motion was APPROVED by roll call vote 5 to 0.

Yeas: Burdette, Farrell, Krouse, Maloof, Smith –5
Nays: None.
CASE NO. HPC 19-09
Public Hearing on the request of Jonathan Thomas and Jennifer Replogle, to obtain a Certificate of Appropriateness to allow for the installation of roof mounted solar panels for the property located at 1602 W. Moss Avenue (Parcel Identification No. 18-08-176-003), Peoria, Illinois (Council District 2).

Urban Planner, Kerilyn Weick, Community Development Department, read Case No. HPC 19-09 into the record and presented the request as outlined in the memo.

Commissioner Smith asked for clarification on the placement and installation of the proposed alteration.

Chairperson pro tem Krouse opened the Public Hearing.

The applicant was not present at the hearing. With no interest from the public, Chairperson pro tem Krouse closed the hearing to public testimony.

Motion:
Commissioner Smith made a motion to defer the request to the next regular scheduled hearing in order for the applicant to be present and explain the placement and installation method of the proposed alteration; seconded by Commissioner Farrell.

The motion was APPROVED by roll call vote 5 to 0.
Yeas: Burdette, Farrell, Krouse, Maloof, Smith –5
Nays: None.

CASE NO. HPC 19-10
Public Hearing on the request of Westminster Presbyterian Church to obtain a Certificate of Appropriateness to allow change to the exterior architectural appearance of the side entrance pillars for the property located at 1420 W. Moss Avenue (Parcel Identification No. 18-08-133-001), Peoria, Illinois (Council District 2).

Urban Planner, Kerilyn Weick, Community Development Department, explained the case is withdrawn by staff due to Peoria City Code Chapter 16, Section 16-86(b) which reads: No property or structure that is owned by a religious organization and is used primarily as a place for the conduct of religious ceremonies or to further the religious mission or business of the owner shall be subject to the regulations set forth in Articles I through IV of this chapter by reason of its location within a historic district.

NEW BUSINESS
Request from the City of Peoria Community Development Department Grants Management Division for comments from the Commission regarding a proposed residential development in the North Side Historic District, National Historic District, pursuant to the National Historic Preservation Act Section 106 review process.

Senior Grants Coordinator, Kathryn Murphy, Community Development Department summarized the single family development proposal at 1017/1019 NE Madison. The purposed of this request is for comments on whether the proposal would have adverse effect on the North Side Historic District, a National Historic District.

Commissioners asked about current conditions on the lot and proposed materials for the new dwelling.

Staff member, Trina Bonds, swore in the public.

Lea Ann Schmidgall, Habitat for Humanity of Greater Peoria Area Executive Director, explained the decision to use vinyl siding and double hung aluminum windows was previously approved by Illinois Historic Preservation Agency. The agency would review each future case for development if federal funds were being used on the project.

Commissioner Maloof complemented the project.

In response to Commissioner Smith, Ms. Schmidgall explained this unit does not need to meet federal accessibility requirements. Other units have been designed to accommodate as needed.

Chairperson pro tem Krouse opened the discussion to the public. There was no one present to speak further on this topic.
**UNFINISHED BUSINESS**

**Discussion of Chapter 16 Historic Preservation Code – Designation Procedure**
Chairperson pro tem Krouse opened the discussion topic.

Commissioner Smith summarized commission discussion on this topic to date. There have been past examples of properties with historical value but could not acquire owners consent to have designated as a landmark. Owner consent is difficult to acquire because of the perception of being told what to do.

Commissioners discussed properties in a district or landmarked must acquire Certificate of Appropriateness for demolition.

Commissioner Smith volunteered to report back after discussing this topic with the Illinois Historic Preservation Agency or the Peoria Historical Society.

Chairperson pro tem Krouse opened the discussion to the public. There was no one present to speak further on this topic.

**Discussion on possible creation of Pictorial Architectural Index**
Chairperson pro tem Krouse opened the discussion topic.

Commissioner Farrell identified existing resources from Bradley University library and Peoria Historical Society. Commissioners discussed the limitations of the formatting and access to these materials.

Commissioner Maloof suggested the indexing start with one district and consider use of drones.

Commissioner Smith suggested use of photos taken by realty companies for recent sales and contacting neighborhood associations. Commissioner Farrell added members of the Moss-High Neighborhood Association have photos.

Ms. Weick, offered to send the agenda for the next hearing to presidents of neighborhood associations in local historic districts.

Commissioners discussed they will still need to identify how to store, maintain, share the index but agreed it would be a valuable resource for home owners and potential buyers.

Chairperson pro tem Krouse opened the discussion to the public. There was no one present to speak further on this topic.

**CITIZENS’ OPPORTUNITY TO ADDRESS THE COMMISSION**

Ms. Weick thanked former commissioners Robert Powers and Deborah Dougherty for their service to the commission. Robert Powers served since 2007 and Deborah Dougherty served since 2014. Ms. Weick introduced the new members of the Commission, Marsha Burdette, and Marisa Farrell. Ms. Weick reminded new commissioners and recently re-appointed commissioners to complete the required online Open Meetings Act training through the Illinois Attorney General’s Office.

**ADJOURNMENT**

Commissioner Maloof moved to adjourn the Historic Preservation Commission meeting; seconded by Commissioner Smith.

The motion was approved viva voce vote 5 to 0.

The Historic Preservation Commission Meeting adjourned at approximately 10:10 a.m.

Kerilyn Weick, Urban Planner
TO: Historic Preservation Commission
FROM: Kerilyn Weick, Urban Planner
DATE: August 28, 2019
RE: HPC CASE NO.19-09: Public hearing on the request of Jonathan Thomas and Jennifer Replogle, to obtain a Certificate of Appropriateness to allow for the installation of roof mounted solar panels for the property located at 1602 W. Moss Avenue (Parcel Identification No. 18-08-176-003), Peoria, Illinois (Council District 2). Case was continued from the July 24, 2019 hearing.

NOTIFICATION:
Mailed notification was provided to property owners with property in the local historic district and within 250 radial feet of the subject site. Notice was sent no less than 15 days prior to the July hearing. Re-noticing for a continued case is not required.

REQUEST SUMMARY:
The applicant requests a Certificate of Appropriateness to install roof-mounted solar panels for the property located at 1602 W. Moss Avenue. The proposed solar panels would be mounted on the south facing roof which is not visible from Moss Avenue. The property is in the Moss-High local historic district.

This request was continued from the July Historic Preservation Commission hearing in order for the applicant to respond to questions by the commission regarding the location and installation of the proposed equipment. Please refer to the attached application for more detailed information on the proposal.

DISCUSSION:
The Commission should consider the criteria in Historic Preservation Ordinance Section 16-64, when determining if the proposed work is compatible and appropriate.

OPTIONS:
- Approve the application as requested.
- Modify and grant the application.
- Deny the application.

If denied, the petitioner will not be able to submit an application for the same improvements until it is modified to fit the Commission’s requests, or a period of 1 year has elapsed.
Disclaimer: Data is provided 'as is' without warranty or any representation of accuracy, timeliness or completeness. The burden for determining fitness for, or the appropriateness for use, rests solely on the requester. The requester acknowledges and accepts the limitations of the Data, including the fact that the Data is in a constant state of maintenance. This website is NOT intended to be used for legal litigation or boundary disputes and is informational only. -Peoria County GIS Division
Certificate of Appropriateness Application
Historic Preservation Commission

Property Information: (The property the work will be performed on)
Address: 1602 W Moss Avenue Zip Code: 61606
Tax ID Number: IX-0X-176-002 Architectural Style: Modified Dutch Colonial

Applicant: (The person/organization applying.)
Name: Jonathan Thomas
Company/Neighborhood Association: Moss-Bradley
Address: 1602 W Moss Ave
City: Peoria State: IL ZIP: 61606
Daytime Phone: (540) 379-8690 Email: jonathan.ryan.thomas@gmail.com
Applicant Signature: [Signature] Date: 6-20-19

Owner: (Skip this section if the applicant and owner information is the same)
Name:
Company/Neighborhood Association:
Address:
City: State: ZIP:
Daytime Phone: Email:
Owner Signature: Date:

Contractor Information: (If available, not required)
Name: Brian Tresenriter
Company/Neighborhood Association: Porter Electric LLC
Address: 1504 N 8th Street
City: Pekin State: IL ZIP: 61554
Daytime Phone: (309) 360-1716 Email: Brian@porter-electric.com
Twenty-eight solar panels will be mounted to the roof on the bluff side of my home to replace 100% of my home’s electricity usage. The panels and the support materials will be black. By law, no panel is allowed to be placed within three feet of the edge (top or side) of the roof, and these will be closer to five feet from the edge. That is to say, given the pitch of the roof and the angle of the house, they will not be visible from the street at all, or even from the adjoining properties. They layout was designed with only four panels on the uppermost part of the roof, and the majority of the panels on the lesser-pitched section so as to minimize their visibility to neighbors as well as maximize their sun exposure. Ameren has already replaced our electrical meter with a smart meter (which is being done for all customers), so the scope of the work is only what is spelled out in the proposal from Porter Electric which is attached, along with a brochure on the panels and the inverters they use, and an image of the placement of the panels on my roof. The panels themselves carry a warranty of twenty-five years, but a usual lifespan of thirty-five to forty so this is a project that should last a generation.
Prepared For:
Jonathan Thomas
1602 W Moss Ave
Peoria, IL 61606

Prepared By:
Brian Tresenriter
309-360-1716
brian@porter-electric.com

Jonathon Ryan Thomas

About Porter Electric .......................................................... 2
Your Utility Today, Without Solar ....................................... 3
Solar PV System Details ....................................................... 4
Your Future Utility, With Solar ............................................. 5
Financing Summary ............................................................ 6
  Cash Purchase - Cash Flow Analysis ................................. 7
About Porter Electric

Proven Track Record

We're Northern California's leading, full-service solar energy provider, having installed over 3,000 solar systems over the last 10 years, throughout the Bay Area. Over 95% of our customers said they were "extremely satisfied" with our work. We have an 4.9-star average review on Yelp, and A+ rating with the Better Business Bureau.

Guaranteed Performance

We guarantee the amount of energy your system produces for the first ten years, or we pay you the difference. We also provide a bumper-to-bumper warranty: maintaining and repairing your entire system for the first ten years. We put our money where our mouth is, with the best coverage in the industry, at no additional cost.

Customer Testimonials

"Energy Toolbase is broadly considered the best-in-class tool for commercial financial modeling."

Paul Gibbs
HelioScope

"Energy Toolbase allows us to efficiently and accurately model solar and storage in combination or individually for our commercial customers. It is the 'easy' button for our team."

Jesse Nickerman
PetersenDean

"Flexibility, ease of use and a powerful platform make the Energy Toolbase hands down the best solar analytics program on the market. With constant updates rolling out the program continues to stay relevant as well as build upon its already robust design. We would not be able to perform some of our complex combined technology analyses without this program."

Quinn Laudenslager
Sullivan Solar Power

Custom Approach

We believe that when it comes to designing and installing an integrated residential solar PV system, one size does not fit all. We custom tailor every system to best fit our customers' homes, lifestyles and savings goals. Our energy consultants will work with you to determine the best fit technology, system size, and financing offerings for your needs.

Highest Quality

We hire and train the best installers in the business, many of which have been with us for over a decade. We do everything in-house, allowing us to design and install high-performance integrated solar energy systems, and then guarantee the performance and production. We have a rigorous 100-point quality assurance process.

See our Customer Reviews
Your Utility Today, Without Solar

<table>
<thead>
<tr>
<th>Utility Details</th>
<th>Cost Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Utility Company</strong></td>
<td><strong>Current Rate Schedule</strong></td>
</tr>
<tr>
<td>Ameren-IL</td>
<td>DS-1 (Porter Electric)</td>
</tr>
</tbody>
</table>

Monthly usage & billing data:

<table>
<thead>
<tr>
<th>Time Periods</th>
<th>Energy Use (kWh)</th>
<th>Charges</th>
<th>Charges</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bill Ranges &amp; Seasons</td>
<td>Total</td>
<td>Other</td>
<td>Energy</td>
</tr>
<tr>
<td>1/1/2019 - 2/1/2019 W</td>
<td>1,054</td>
<td>$14</td>
<td>$86</td>
</tr>
<tr>
<td>2/1/2019 - 3/1/2019 W</td>
<td>1,048</td>
<td>$14</td>
<td>$86</td>
</tr>
<tr>
<td>3/1/2019 - 4/1/2019 W</td>
<td>951</td>
<td>$14</td>
<td>$50</td>
</tr>
<tr>
<td>4/1/2019 - 5/1/2019 W</td>
<td>695</td>
<td>$14</td>
<td>$62</td>
</tr>
<tr>
<td>5/1/2018 - 6/1/2018 W</td>
<td>594</td>
<td>$14</td>
<td>$53</td>
</tr>
<tr>
<td>6/1/2018 - 7/1/2018 S</td>
<td>1,338</td>
<td>$14</td>
<td>$134</td>
</tr>
<tr>
<td>7/1/2018 - 8/1/2018 S</td>
<td>1,642</td>
<td>$14</td>
<td>$164</td>
</tr>
<tr>
<td>8/1/2018 - 9/1/2018 S</td>
<td>1,122</td>
<td>$14</td>
<td>$112</td>
</tr>
<tr>
<td>9/1/2018 - 10/1/2018 S</td>
<td>1,628</td>
<td>$14</td>
<td>$163</td>
</tr>
<tr>
<td>10/1/2018 - 11/1/2018 W</td>
<td>937</td>
<td>$14</td>
<td>$79</td>
</tr>
<tr>
<td>11/1/2018 - 12/1/2018 W</td>
<td>563</td>
<td>$14</td>
<td>$50</td>
</tr>
<tr>
<td>12/1/2018 - 1/1/2019 W</td>
<td>902</td>
<td>$14</td>
<td>$77</td>
</tr>
<tr>
<td>Totals:</td>
<td>12,474</td>
<td>$162</td>
<td>$1,145</td>
</tr>
</tbody>
</table>

About Your Utility

**No choice:**
Your utility is 100+ year old monopoly, meaning they don't have competition, they have guaranteed profits and you don't have any say.

**Rates are rising:**
California has some of the highest average retail electricity prices in the country. On average we anticipate rates will increase by 3.5% annually.

**Pollution:**
Over 2/3 of utility energy generation comes from fossil-fuel plants, like coal or natural gas. This leads to pollution, climate change, and health impacts in our communities.

---

Prepared By: Brian Tresenrter
P: 309-360-1716, E: brian@porter-electric.com
Solar PV System Details

System Size & Generation:
9,240 W-DC  System Size (DC)
6,440.0 W-AC  System Size (AC)
12,722 kWh  1st Year Generation

Energy Use (kWh)  | Solar Generation (kWh)

1/1 - 2/1
3/1 - 4/1
5/1 - 6/1
7/1 - 8/1
9/1 - 10/1
11/1 - 12/1

Roof layout rendering:

Equipment:
(28) Canadian Solar CS1H-330MS  Solar panels
(28) Enphase IQ6-60-2-US  Inverter(s)

System Pricing & Incentives:
Solar PV System Cost  $32,432
SREC  -$13,890
Federal Tax Credit  -$9,730
Net Solar PV System Cost:  $8,813

Prepared By: Brian Tresenriter
P: 309-360-1716, E: brian@porter-electric.com
## Your Future Utility, With Solar

### Utility Details

<table>
<thead>
<tr>
<th>Utility Company</th>
<th>Post-solar Rate Schedule</th>
<th>Annual usage</th>
<th>Total Savings</th>
<th>Total Solar Production</th>
<th>Avg blended savings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ameren-IL</td>
<td>DS-1 (Porter Electric)</td>
<td>12,474 kWh</td>
<td>$1,157</td>
<td>12,722 kWh</td>
<td>$0.091/kWh</td>
</tr>
</tbody>
</table>

## Monthly Utility Bills, Post-Solar

<table>
<thead>
<tr>
<th>Time Periods</th>
<th>Energy Use (kWh)</th>
<th>Charges</th>
<th>Charges</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>Other</td>
<td>Energy</td>
</tr>
<tr>
<td>1/1/2019 - 2/1/2019 W</td>
<td>355</td>
<td>$14</td>
<td>$31</td>
</tr>
<tr>
<td>6/1/2018 - 7/1/2018 S</td>
<td>-77</td>
<td>$14</td>
<td>-$8</td>
</tr>
<tr>
<td>7/1/2018 - 8/1/2018 S</td>
<td>226</td>
<td>$14</td>
<td>$23</td>
</tr>
<tr>
<td>8/1/2018 - 9/1/2018 S</td>
<td>-209</td>
<td>$14</td>
<td>-$21</td>
</tr>
<tr>
<td>9/1/2018 - 10/1/2018 S</td>
<td>481</td>
<td>$14</td>
<td>$48</td>
</tr>
<tr>
<td>10/1/2018 - 11/1/2018 W</td>
<td>-72</td>
<td>$14</td>
<td>-$6</td>
</tr>
<tr>
<td>11/1/2018 - 12/1/2018 W</td>
<td>-107</td>
<td>$14</td>
<td>-$9</td>
</tr>
<tr>
<td>12/1/2018 - 1/1/2019 W</td>
<td>281</td>
<td>$14</td>
<td>$25</td>
</tr>
</tbody>
</table>

**Totals:**
-248 kWh
$162
-$12
$150

**Avoided Cost calculation:**
- **Pre-solar utility bill:** $1,307
- **Post-solar utility bill:** $150
- **Savings:** $1,157
## Financing Summary

<table>
<thead>
<tr>
<th>Payment Options</th>
<th>Cash Purchase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upfront Payment</td>
<td>$32,432</td>
</tr>
<tr>
<td>Total Payments</td>
<td>$32,432</td>
</tr>
<tr>
<td>Rebates and Incentives</td>
<td>$23,619</td>
</tr>
<tr>
<td>Net Payments</td>
<td>$8,813</td>
</tr>
<tr>
<td>30-Year Electric Bill Savings</td>
<td>$54,650</td>
</tr>
<tr>
<td>30-Year IRR</td>
<td>13.44%</td>
</tr>
<tr>
<td>30-Year LCOE PV</td>
<td>$0.025</td>
</tr>
<tr>
<td>30-Year NPV</td>
<td>$15,626</td>
</tr>
<tr>
<td>Payback Period</td>
<td>7.5 Years</td>
</tr>
</tbody>
</table>

### Cumulative Energy Costs By Payment Option

- **Avoided Utility Cost**
- **Cash Purchase**

**Benefits of Payment Options:**

**Cash Purchase:**
- Maximize your savings by owning a secure long-term investment.
- Use federal investment tax credit to reduce your tax liability.
- Increase the market value of your home.

**Lease or PPA:**
- Receive the benefits of having solar, with little or no money down.
- Avoid the responsibility of maintenance and repairs.
- Do not have tax liability to monetize the federal tax credit.

**Loan:**
- Numerous low-cost, low interest rate loan programs are available.
- 'Own' an asset that generates significant financial value, unlike other home improvement loans.
- Achieve immediate savings, as you repay the loan over time.

---

**Prepared By:** Brian Tresenriter  
**P:** 309-360-1716, **E:** brian@porter-electric.com
| Assumptions | 20-Year Rate: 12.1% | 10-Year Rate: 5.2% | Roi: 25.7% | Payback: 7.5 Years | Financial Metrics | Cumulative Cash Flow | Total Cash Flow | Federal Tax (kM) | Py Generation | Electric Bill | Emissions Saving | Spec | Project Cost | Cash | Years |
|-------------|---------------------|-------------------|-------------|------------------|------------------|-------------------|-------------------|----------------|--------------|--------------|----------------|-------------|----------|-------------|-------|-------|
|             | 4.696               | 3.724             | 5.244       | 4.9723           |                  |                   |                   |                |              |              |                |             |          |             |      |      |
|             | 5.1771              | -                 | -           | -                |                  |                   |                   |                |              |              |                |             |          |             |      |      |
|             |                     |                   |             |                  |                  |                   |                   |                |              |              |                |             |          |             |      |      |
HiDM
HIGH DENSITY MONO PERC MODULE
320 W ~ 335 W
CS1H-320|325|330|335MS (IEC1000 V)

MORE POWER

Maximize the light absorption area, module efficiency up to 19.86%

Low NIMOT: 42 ± 3 °C
Low temperature coefficient (Pmax): -0.37 % / °C

Better shading tolerance

MORE RELIABLE

Lower internal current, lower hot spot temperature
Cell crack risk limited in small region, enhance the module reliability

Heavy snow load up to 5400 Pa, wind load up to 2400 Pa

25 years linear power output warranty
10 years product warranty on materials and workmanship

MANAGEMENT SYSTEM CERTIFICATES*
ISO 9001:2015 / Quality management system
ISO 14001:2015 / Standards for environmental management system
OHSAS 18001:2007 / International standards for occupational health & safety

PRODUCT CERTIFICATES*
IEC 61215 / IEC 61730: VDE / CE / CEC AU
IEC61701 ED2: VDE / IEC62716: VDE
UL 1703: CSA
Take-e-way

* We can provide this product with special BOM specifically certified with salt mist, and ammonia tests. Please talk to our local technical sales representatives to get your customized solutions.

CANADIAN SOLAR INC. is committed to providing high quality solar products, solar system solutions and services to customers around the world. No. 1 module supplier for quality and performance/price ratio in IHS Module Customer Insight Survey. As a leading PV project developer and manufacturer of solar modules with over 30 GW deployed around the world since 2001.
**ENGINEERING DRAWING**

- **Rear View**
- **Frame Cross Section A-A**
- **Mounting Hole**

**CS1H-330MS / I-V CURVES**

**ELECTRICAL DATA | STC**

<table>
<thead>
<tr>
<th>CS1H</th>
<th>320MS</th>
<th>325MS</th>
<th>330MS</th>
<th>335MS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal Max. Power (Pmax)</td>
<td>320 W</td>
<td>325 W</td>
<td>330 W</td>
<td>335 W</td>
</tr>
<tr>
<td>Opt. Operating Voltage (Vmp)</td>
<td>35.6 V</td>
<td>35.8 V</td>
<td>36.0 V</td>
<td>36.2 V</td>
</tr>
<tr>
<td>Opt. Operating Current (Imp)</td>
<td>9.00 A</td>
<td>9.09 A</td>
<td>9.18 A</td>
<td>9.27 A</td>
</tr>
<tr>
<td>Open Circuit Voltage (Voc)</td>
<td>43.3 V</td>
<td>43.4 V</td>
<td>43.5 V</td>
<td>43.6 V</td>
</tr>
<tr>
<td>Short Circuit Current (Isc)</td>
<td>9.51 A</td>
<td>9.58 A</td>
<td>9.65 A</td>
<td>9.73 A</td>
</tr>
<tr>
<td>Module Efficiency</td>
<td>18.96%</td>
<td>19.27%</td>
<td>19.57%</td>
<td>19.86%</td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>-40°C ~ +85°C</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Max. System Voltage</td>
<td>1500V (IEC) or 1000V (IEC/UL)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Module Fire Performance</td>
<td>TYPE 1 (UL 1703) or CLASS C (IEC 61730)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Max. Series Fuse Rating</td>
<td>20 A</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Application Classification</td>
<td>Class A</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Power Tolerance</td>
<td>0 ~ +5 W</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Under Standard Test Conditions (STC) of irradiance of 1000 W/m², spectrum AM 1.5 and cell temperature of 25°C. Measurement uncertainty: ±3 % (Pmax).

**MECHANICAL DATA**

- **Specification**
  - **Data**
  - **Cell Type** Mono-crystalline
  - **Dimensions** 1700 x 992 x 35 mm
    (66.9 x 39.1 x 1.38 in)
  - **Weight** 19.2 kg (42.3 lbs)
  - **Front Cover** 3.2 mm tempered glass
  - **Frame** Anodized aluminium alloy
  - **J-Box** IP67, 3 bypass diodes
  - **Cable** 4.0 mm² (IEC), 12 AWG (UL)
  - **Cable Length** 1350 mm (53.1 in)
  - **(Including Connector)**
  - **Connector** T4 series (MC4 series is available)
  - **Per Pallet** 30 pieces
  - **Per Container (40' HQ)** 780 pieces

**ELECTRICAL DATA | NMOT**

<table>
<thead>
<tr>
<th>CS1H</th>
<th>320MS</th>
<th>325MS</th>
<th>330MS</th>
<th>335MS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal Max. Power (Pmax)</td>
<td>239 W</td>
<td>242 W</td>
<td>246 W</td>
<td>250 W</td>
</tr>
<tr>
<td>Opt. Operating Voltage (Vmp)</td>
<td>32.5 V</td>
<td>32.7 V</td>
<td>32.8 V</td>
<td>33.0 V</td>
</tr>
<tr>
<td>Opt. Operating Current (Imp)</td>
<td>7.35 A</td>
<td>7.42 A</td>
<td>7.50 A</td>
<td>7.57 A</td>
</tr>
<tr>
<td>Open Circuit Voltage (Voc)</td>
<td>40.7 V</td>
<td>40.8 V</td>
<td>40.9 V</td>
<td>41.0 V</td>
</tr>
<tr>
<td>Short Circuit Current (Isc)</td>
<td>7.67 A</td>
<td>7.73 A</td>
<td>7.78 A</td>
<td>7.84 A</td>
</tr>
</tbody>
</table>

* Under Nominal Module Operating Temperature (NMOT), Irradiance of 800 W/m², spectrum AM 1.5, ambient temperature 20°C, wind speed 1 m/s.

**TEMPERATURE CHARACTERISTICS**

- **Specification**
  - **Data**
  - **Temperature Coefficient (Pmax)** -0.37 % / °C
  - **Temperature Coefficient (Voc)** -0.29 % / °C
  - **Temperature Coefficient (Isc)** 0.05 % / °C
  - **Nominal Module Operating Temperature** 42±3 °C

**PARTNER SECTION**

The specifications and key features contained in this datasheet may deviate slightly from our actual products due to the on-going innovation and product enhancement. Canadian Solar Inc. reserves the right to make necessary adjustments to the information described herein at any time without further notice.

CANADIAN SOLAR INC.
Canadian Solar MSS (Australia) Pty Ltd., 44 Stepheenson St, Cremorne VIC 3121, Australia
support@canadiansolar.com, www.canadiansolar.com/au

December 2018. All rights reserved, PV Module Product Datasheet V5.571_AU
* Manufactured and assembled in China or Thailand.
Enphase
IQ 6 and IQ 6+ Microinverters

The high-powered smart grid-ready Enphase IQ 6 Micro™ and Enphase IQ 6+ Micro™ dramatically simplify the installation process while achieving the highest efficiency for module-level power electronics.

Part of the Enphase IQ System, the IQ 6 and IQ 6+ Micro integrate seamlessly with the Enphase IQ Envoy™, Enphase Q Aggregator™, Enphase IQ Battery™, and the Enphase Enlighten™ monitoring and analysis software.

The IQ 6 and IQ 6+ Micro extend the reliability standards set forth by previous generations and undergo over a million hours of power-on testing, enabling Enphase to provide an industry-leading warranty of up to 25 years.

Easy to Install
- Lightweight and simple
- Faster installation with improved two-wire cabling
- Built-in rapid shutdown compliant (NEC 2014 & 2017)

Productive and Reliable
- Optimized for high powered 60-cell and 72-cell* modules
- More than a million hours of testing
- Class II double-insulated enclosure
- UL listed

Smart Grid Ready
- Complies with fixed power factor, voltage and frequency ride through requirements
- Remotely updates to respond to changing grid requirements
- Configurable for varying grid profiles
- Meets CA Rule 21 (UL 1741-SA)

* The IQ 6+ Micro is required to support 72-cell modules

To learn more about Enphase offerings, visit enphase.com

ENPHASE
# Enphase IQ 6 and IQ 6+ Microinverters

## INPUT DATA (DC)

<table>
<thead>
<tr>
<th></th>
<th>IQ6-60-2-US</th>
<th>IQ6PLUS-72-2-US</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commonly used module pairings</td>
<td>195 W - 330 W +</td>
<td>235 W - 400 W +</td>
</tr>
<tr>
<td>Module compatibility</td>
<td>60-cell PV modules only</td>
<td>60-cell and 72-cell PV modules</td>
</tr>
<tr>
<td>Maximum input DC voltage</td>
<td>48 V</td>
<td>62 V</td>
</tr>
<tr>
<td>Peak power tracking voltage</td>
<td>27 V - 37 V</td>
<td>27 V - 45 V</td>
</tr>
<tr>
<td>Operating range</td>
<td>16 V - 48 V</td>
<td>16 V - 62 V</td>
</tr>
<tr>
<td>Min/Max start voltage</td>
<td>22 V / 48 V</td>
<td>22 V / 62 V</td>
</tr>
<tr>
<td>Max DC short circuit current (module ISC)</td>
<td>15 A</td>
<td>15 A</td>
</tr>
<tr>
<td>Overvoltage class DC port</td>
<td>II</td>
<td>II</td>
</tr>
<tr>
<td>DC port backfeed under single fault</td>
<td>0 A</td>
<td>0 A</td>
</tr>
<tr>
<td>PV array configuration</td>
<td>1 x 1 ungrounded array; No additional DC side protection required; AC side protection requires max 20A per branch circuit</td>
<td></td>
</tr>
</tbody>
</table>

## OUTPUT DATA (AC)

<table>
<thead>
<tr>
<th></th>
<th>IQ 6 Microinverter</th>
<th>IQ 6+ Microinverter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peak output power</td>
<td>240 VA</td>
<td>250 VA</td>
</tr>
<tr>
<td>Continuous output power</td>
<td>230 VA</td>
<td>280 VA</td>
</tr>
<tr>
<td>Nominal (L-L) voltage</td>
<td>240 V / 211-264 V</td>
<td>208 V / 183-229 V</td>
</tr>
<tr>
<td>Maximum continuous output current</td>
<td>0.96 A / 1.11 A</td>
<td>1.17 A / 1.35 A</td>
</tr>
<tr>
<td>Nominal frequency</td>
<td>60 Hz</td>
<td>60 Hz</td>
</tr>
<tr>
<td>Extended frequency range</td>
<td>47 - 68 Hz</td>
<td>47 - 68 Hz</td>
</tr>
<tr>
<td>Power factor at rated power</td>
<td>1.0</td>
<td>1.0</td>
</tr>
<tr>
<td>Maximum units per 20 A (L-L) branch circuit</td>
<td>16 (240 VAC)</td>
<td>13 (240 VAC)</td>
</tr>
<tr>
<td>AC port backfeed under single fault</td>
<td>0 A</td>
<td>0 A</td>
</tr>
<tr>
<td>Power factor (adjustable)</td>
<td>0.7 leading ... 0.7 lagging</td>
<td>0.7 leading ... 0.7 lagging</td>
</tr>
</tbody>
</table>

### EFFICIENCY

<table>
<thead>
<tr>
<th></th>
<th>IQ 6 Microinverter</th>
<th>IQ 6+ Microinverter</th>
</tr>
</thead>
<tbody>
<tr>
<td>CEC weighted efficiency</td>
<td>@240 V 97.0 %</td>
<td>@208 V 97.0 %</td>
</tr>
</tbody>
</table>

## MECHANICAL DATA

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Ambient temperature range</td>
<td>-40°C to +65°C</td>
</tr>
<tr>
<td>Relative humidity range</td>
<td>4% to 100% (condensing)</td>
</tr>
<tr>
<td>Connector type</td>
<td>MC4 locking type</td>
</tr>
<tr>
<td>Dimensions (WxHxD)</td>
<td>219 mm x 191 mm x 37.9 mm (without bracket)</td>
</tr>
<tr>
<td>Weight</td>
<td>1.29 kg (2.84 lbs)</td>
</tr>
<tr>
<td>Cooling</td>
<td>Natural convection: No fans</td>
</tr>
<tr>
<td>Approved for wet locations</td>
<td>Yes</td>
</tr>
<tr>
<td>Pollution degree</td>
<td>PD3</td>
</tr>
<tr>
<td>Enclosure</td>
<td>Class II double-insulated</td>
</tr>
<tr>
<td>Environmental category / UV exposure rating</td>
<td>NEMA Type 6 / outdoor</td>
</tr>
</tbody>
</table>

## FEATURES

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication</td>
<td>Enlighten Manager and MyEnlighten monitoring options</td>
</tr>
<tr>
<td>Monitoring</td>
<td>Compatible with Enphase IQ Envoy</td>
</tr>
<tr>
<td>Disconnecting means</td>
<td>The AC and DC connectors have been evaluated and approved by UL for use as the load-break disconnect required by NEC 690</td>
</tr>
<tr>
<td>Compliance</td>
<td>CA Rule 21 (UL 1741-SA)</td>
</tr>
<tr>
<td></td>
<td>UL 62109-1, UL1741/IEEE1547, FCC Part 15 Class B, ICES-0003 Class B, CAN/CSA-C22.2 NO. 1071-01</td>
</tr>
<tr>
<td></td>
<td>This product is UL Listed as PV Rapid Shut Down Equipment and conforms with NEC-2014 and NEC-2017 section 690.12 and C22.1-2015 Rule 64-218 Rapid Shutdown of PV Systems, for AC and DC conductors, when installed according manufacturer’s instructions.</td>
</tr>
</tbody>
</table>

---

2. Nominal voltage range can be extended beyond nominal if required by the utility.

To learn more about Enphase offerings, visit enphase.com
STATE OF ILLINOIS

ILLINOIS COMMERCE COMMISSION

Porter Electric LLC
Application for Certification as an Installer of Distributed Generation Facilities under Section 16-128A of the Public Utilities Act: 18-0731

ORDER

By the Commission:

I. INTRODUCTION

On April 3, 2018, Porter Electric LLC ("Applicant" or "Company") filed a verified Application with the Illinois Commerce Commission ("Commission") requesting a certificate of service authority to operate as an installer of distributed generation facilities in Illinois pursuant to Section 16-128A of the Public Utilities Act ("Act"). 220 ILCS 5/16-128A. The Applicant requests authority to offer services as an Installer of Distributed Generation Facilities for solar photovoltaic types of distributed generation technology in the State of Illinois. On June 27, 2018, Staff of the Commission ("Staff") filed a Verified Statement recommending that the Commission grant the requested certificate of service authority. The Administrative Law Judge waived the hearing in this matter, entered Staff's Verified Statement into the record and marked the record "Heard & Taken."

II. REQUIREMENTS FOR ALL APPLICANTS UNDER SECTION 16-128A OF THE ACT

The Applicant has provided all pertinent contact information for itself as well as those persons or entities responsible for issues related to processing of the Application and Applicant's applicable federal employer identification number or taxpayer identification number. The Applicant agrees to comply with informational and reporting requirements established in Section 468.50 of the Commission's Rules. 83 Ill. Adm. Code 468.50. In addition, the Applicant agrees to accept service by electronic means as provided under the Commission's Rules of Practice. 83 Ill. Adm. Code 200.1050. The Application also includes the following information regarding the person who will perform or directly supervise installation to satisfy the requirements of Section 468.50:

1. A copy of the certification of satisfactory completion of the relevant training programs; and/or

2. An Affidavit by each qualifying person attesting to having satisfactorily completed at least five (5) installations of distributed generation facilities for solar photovoltaic distributed generation technology.
III. CERTIFICATION REQUIREMENTS UNDER SECTION 468.60

Applicant has demonstrated that it meets the following five (5) requirements in Section 468.60:

a) It will remain in compliance with all applicable laws and regulations and Commission rules and orders, including, but not limited to, the requirements of Sections 16-128(a) and 16-128A of the Act and Section 468.

b) It will ensure that its employees, agents or contractors, or the employees, agents or contractors of any entity, agent or contractor with which he has contracted to perform those functions within the State of Illinois, shall:

1) Comply with applicable building and electrical codes, including those contained in the National Electric Code;

2) Comply with the distributed generation facility manufacturer's installation instructions;

3) Install only distributed generation facilities that meet recognized industry standards; and

4) Ensure that all obligations required under this Section and Sections 16-128(a) and 16-128A of the Act are met prior to placing into, or returning into, use any distributed generation facility that the certificate holder installed.

c) It will comply with applicable licensing and municipal bonding requirements to do business in the State of Illinois.

d) Every installation of a distributed generation facility will be performed only by:

1) A qualified person; or

2) An electrical contractor who is not a qualified person, provided he/she is directly supervised by a qualified person; or

3) a person who is not a qualified person but is enrolled in a training program that, upon satisfactory completion, will meet the requirement to become a qualified person, provided he/she is directly supervised by a qualified person.

e) It is licensed to do business in the State of Illinois.

IV. CONSUMER COMPLAINTS

The Applicant states it is not certified or licensed to operate as an Installer of Distributed Generation Facilities in any other state. It also declares it has not received consumer complaints in any state in the last five years.

V. COMMISSION CONCLUSION AND CERTIFICATE OF SERVICE AUTHORITY

The Commission has reviewed the Application and attachments provided by Applicant and finds that the Applicant sufficiently demonstrates compliance with the requirements of the Act and Part 468. Staff reviewed the Application and recommended
that the Applicant be granted a certificate of service authority as an Installer of Distributed Generation Facilities. The Commission concludes, therefore, that the Applicant’s request for a certificate of service authority to operate as an Installer of Distributed Generation Facilities for solar photovoltaic types of distributed generation technology in Illinois should be granted and should include the following authority:

CERTIFICATE OF SERVICE AUTHORITY

IT IS CERTIFIED that Porter Electric LLC is granted service authority to operate as an Installer of Distributed Generation Facilities for solar photovoltaic types of distributed generation technology in the State of Illinois.

VI. FINDINGS AND ORDERING PARAGRAPHS

The Commission, having reviewed the entire record, is of the opinion and finds that:

(1) Porter Electric LLC is authorized to transact business in Illinois and seeks a certificate of service authority to operate as an Installer of Distributed Generation Facilities for solar photovoltaic types of distributed generation technology under Section 16-128A of the Act;

(2) the Commission has jurisdiction over the party hereto and the subject matter hereof;

(3) the recitals of fact and conclusions reached in the prefatory portion of this Order are supported by the record and are hereby adopted as findings of fact;

(4) Porter Electric LLC has demonstrated that it possesses sufficient certification and experience to provide services as an Installer of Distributed Generation Facilities for solar photovoltaic types of distributed generation technology in the State of Illinois;

(5) Porter Electric LLC has complied with Section 16-128A of the Act and Part 468 and has not been the subject of any consumer complaints in any state; and

(6) Porter Electric LLC should be granted a certificate of service authority to operate as an Installer of Distributed Generation Facilities for solar photovoltaic types of distributed generation technology as specified in this Order.

IT IS THEREFORE ORDERED by the Illinois Commerce Commission that Porter Electric LLC is hereby granted a Certificate of Service Authority to operate as an Installer of Distributed Generation Facilities for solar photovoltaic types of distributed generation technology; said Certificate of Service Authority shall read as that set forth in Section V of this Order.

IT IS FURTHER ORDERED that Porter Electric LLC shall comply with the recertification requirements in 83 Ill. Adm. Code 468.80.
IT IS FURTHER ORDERED that Porter Electric LLC shall comply with all applicable Commission rules and orders now and as hereafter amended.

IT IS FURTHER ORDERED that pursuant to Section 10-113(a) of the Public Utilities Act and 83 Ill. Adm. Code 200.880, any application for rehearing shall be filed within 30 days after service of the Order on the party.

IT IS FURTHER ORDERED that, subject to the provisions of Section 10-113 of the Public Utilities Act and 83 Ill. Adm. Code 200.880, this Order is final; it is not subject to the Administrative Review Law.

By Order of the Commission this 25th day of July, 2018.

(SIGNED) BRIEN SHEAHAN

Chairman
Discussion of Chapter 16 Historic Preservation Code – Designation Procedure
Discussion on possible creation of Pictorial Architectural Index

DISCUSSION:
At the request of the Commission at the June hearing, the following topics for discussion are continued to the regularly scheduled August 28, 2019 Historic Preservation Commission hearing.

Discussion of Chapter 16 Historic Preservation Code – Designation Procedure (ordinance attached)

Discussion on possible creation of Pictorial Architectural Index (Survey)