### SOLAR HIGHWAY INITIATIVE - SITE SELECTION - LOAD ZONE AND BUNDLE REQUIREMENTS 3-29-16

<table>
<thead>
<tr>
<th>Bundle</th>
<th>LOAD ZONE</th>
<th>USAGE: Total kWh for each Zone and Bundle</th>
<th>ZONE requirement as % of total bundle requirement</th>
<th>Required annual kWh production for each Zone and Bundle</th>
<th>Approx. acres of panels to MEET kWh requirements (Total kWh divided by)*:</th>
<th>Approx. acres available for development</th>
<th>Number of sites available in each load zone and bundle</th>
<th>DC capacity (kW); kWh requirement divided by**:</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>West</td>
<td>4,709,944</td>
<td>37.5%</td>
<td>1,500,000</td>
<td>2.34</td>
<td>34.50</td>
<td>3</td>
<td>1,198</td>
</tr>
<tr>
<td>B</td>
<td>Genesee</td>
<td>5,210,530</td>
<td>25.0%</td>
<td>1,000,000</td>
<td>1.56</td>
<td>16.80</td>
<td>4</td>
<td>799</td>
</tr>
<tr>
<td>C</td>
<td>Central</td>
<td>6,240,043</td>
<td>37.5%</td>
<td>1,500,000</td>
<td>2.34</td>
<td>36.10</td>
<td>4</td>
<td>1,198</td>
</tr>
<tr>
<td>Bundle 1 subtotal</td>
<td></td>
<td>16,160,517</td>
<td>25%</td>
<td>4,000,000</td>
<td>6.25</td>
<td>87.40</td>
<td>11</td>
<td>3,195</td>
</tr>
<tr>
<td>E</td>
<td>Mohawk Valley</td>
<td>5,180,822</td>
<td>40.0%</td>
<td>1,600,000</td>
<td>2.50</td>
<td>15.30</td>
<td>3</td>
<td>1,278</td>
</tr>
<tr>
<td>F</td>
<td>Capital</td>
<td>6,836,104</td>
<td>60.0%</td>
<td>2,400,000</td>
<td>3.75</td>
<td>21.50</td>
<td>5</td>
<td>1,917</td>
</tr>
<tr>
<td>Bundle 2 subtotal</td>
<td></td>
<td>12,016,926</td>
<td>33%</td>
<td>4,000,000</td>
<td>6.25</td>
<td>36.80</td>
<td>8</td>
<td>3,195</td>
</tr>
<tr>
<td>G</td>
<td>Hudson Valley</td>
<td>6,108,478</td>
<td>40.0%</td>
<td>2,000,000</td>
<td>3.13</td>
<td>14.80</td>
<td>5</td>
<td>1,597</td>
</tr>
<tr>
<td>H</td>
<td>Milwood</td>
<td>1,820,179</td>
<td>20.0%</td>
<td>1,000,000</td>
<td>1.56</td>
<td>2.50</td>
<td>1</td>
<td>799</td>
</tr>
<tr>
<td>I</td>
<td>Dunwoodie</td>
<td>6,073,372</td>
<td>40.0%</td>
<td>2,000,000</td>
<td>3.13</td>
<td>8.04</td>
<td>2</td>
<td>1,597</td>
</tr>
<tr>
<td>Bundle 3 subtotal</td>
<td></td>
<td>14,002,029</td>
<td>36%</td>
<td>5,000,000</td>
<td>7.81</td>
<td>25.34</td>
<td>8</td>
<td>3,994</td>
</tr>
<tr>
<td>J</td>
<td>New York City</td>
<td>1,482,809</td>
<td>12.0%</td>
<td>840,000</td>
<td>1.31</td>
<td>20.00</td>
<td>2</td>
<td>671</td>
</tr>
<tr>
<td>K</td>
<td>Long Island</td>
<td>19,958,384</td>
<td>88.0%</td>
<td>6,160,000</td>
<td>9.63</td>
<td>20.50</td>
<td>13</td>
<td>4,920</td>
</tr>
<tr>
<td>Bundle 4 subtotal</td>
<td></td>
<td>21,441,193</td>
<td>33%</td>
<td>7,000,000</td>
<td>10.94</td>
<td>40.50</td>
<td>15</td>
<td>5,591</td>
</tr>
<tr>
<td>TOTAL ALL ZONES (DOT)</td>
<td></td>
<td>63,620,665</td>
<td>31%</td>
<td>20,000,000</td>
<td>31.25</td>
<td>190.04</td>
<td>42</td>
<td>15,974</td>
</tr>
</tbody>
</table>

* Conversion factor from NYSERDA - 1 Acre can generate 640,000 kWh annually

** Conversion factor from NYSERDA - 1kW of solar PV DC capacity yields approximately 1,252 AC kWh per year
## SOLAR HIGHWAY INITIATIVE - SITE SELECTION - LOAD ZONE AND BUNDLE REQUIREMENTS 3-29-16

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<tr>
<th>Bundle</th>
<th>LOAD ZONE</th>
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<th>BUNDLE requirement as % of total bundle usage</th>
<th>ZONE requirement as % of total bundle requirement</th>
<th>Required annual kWh production for each Zone and Bundle</th>
<th>Approx. acres of panels to MEET kWh requirements (Total kWh divided by)*:</th>
<th>Approx. acres available for development</th>
<th>Number of sites available in each load zone and bundle</th>
<th>DC capacity (kW); kWh requirement divided by**:</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>West</td>
<td>2,954,378</td>
<td>50.0%</td>
<td>834,662</td>
<td>1.30</td>
<td>9.50</td>
<td>1</td>
<td>667</td>
<td>1,252</td>
</tr>
<tr>
<td>B</td>
<td>Genesee</td>
<td>541,113</td>
<td>10.0%</td>
<td>166,932</td>
<td>0.26</td>
<td>2.70</td>
<td>1</td>
<td>133</td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>Central</td>
<td>2,068,919</td>
<td>40.0%</td>
<td>667,729</td>
<td>1.04</td>
<td>6.40</td>
<td>1</td>
<td>533</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Bundle 5 subtotal</td>
<td>5,564,410</td>
<td>30%</td>
<td>1,669,323</td>
<td>2.61</td>
<td>18.60</td>
<td>3</td>
<td>1,333</td>
<td></td>
</tr>
<tr>
<td>E</td>
<td>Mohawk Valley</td>
<td>847,127</td>
<td>50.0%</td>
<td>329,930</td>
<td>0.52</td>
<td>8.60</td>
<td>2</td>
<td>264</td>
<td></td>
</tr>
<tr>
<td>F</td>
<td>Capital</td>
<td>1,352,408</td>
<td>50.0%</td>
<td>329,930</td>
<td>0.52</td>
<td>8.00</td>
<td>2</td>
<td>264</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Bundle 6 subtotal</td>
<td>2,199,535</td>
<td>30%</td>
<td>659,860</td>
<td>1.03</td>
<td>16.60</td>
<td>4</td>
<td>527</td>
<td></td>
</tr>
<tr>
<td>G</td>
<td>Hudson Valley</td>
<td>3,493,222</td>
<td>100.0%</td>
<td>1,047,966</td>
<td>1.64</td>
<td>5.70</td>
<td>1</td>
<td>837</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Bundle 7 subtotal</td>
<td>3,493,222</td>
<td>30%</td>
<td>1,047,966</td>
<td>1.64</td>
<td>5.70</td>
<td>1</td>
<td>837</td>
<td></td>
</tr>
<tr>
<td>TOTAL ALL ZONES (TA)</td>
<td>11,257,167</td>
<td>30%</td>
<td>3,377,149</td>
<td>5.28</td>
<td>40.90</td>
<td>8</td>
<td>2,697</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Conversion factor from NYSERDA - 1 Acre can generate 640,000 kWh annually

** Conversion factor from NYSERDA - 1kW of solar PV DC capacity yields approximately 1,252 AC kWh per year
**Baseline Solar Site Characteristics:**

- **Lot Size:** Approximately two acres; **Grade:** Relatively level, generally 0 – 15%.
- **Shape:** Sites vary; may be regular (square, rectangle, linear, etc.) or irregular.
- **Site prep:** Requires suitable finish grade for proper panel installation.
- **Vegetation:** Mostly grass; generally free of trees greater than 6” diameter at breast height (dbh) but will require clearing & grubbing of up to ½ acre of brush and scattered small trees (6” dbh or less); Dispose of all trees, brush & debris in accordance w/ NYSDOT Standard Specifications § 201-Clearing & Grubbing (p. 183) and as approved by NYSDOT/NYSTA; Re-establish vegetation (grass, etc.) on disturbed areas not occupied by solar panels or access roads.
- **Soils:** Well drained soil with no contaminants.
- **Rock:** Soils may contain some loose rock but bedrock will likely not be close to the soil surface.
- **Power Connection:** Three phase power connection within 500 feet; underground utility connection required.
- **Access:** Provide a crushed aggregate (equivalent to NYSDOT Standard Specifications §703-02 (p. 937), Size designation 2) access roadway, approximately 10’ wide, 4-6” deep and up to 500 feet long.
- **Security:** No fencing, or security cameras.
- **Setback:** ROW: 50 feet from travel way; adjacent property lines: 30 feet.
- **Panel Coverage:** Panels will cover approximately 80% of the site.
<table>
<thead>
<tr>
<th>SITE #</th>
<th>Route #</th>
<th>Description</th>
<th>NYISO Load Zone NAME</th>
<th>Estimated Areas (acres)</th>
<th>County</th>
<th>Town/ City/ Village</th>
<th>Geographic Coordinates</th>
<th>General shape</th>
<th>General slope (%)</th>
<th>Approx. Distance to nearest three-phase (feet)</th>
<th>Current Use and Character</th>
</tr>
</thead>
<tbody>
<tr>
<td>SA1</td>
<td>I-90</td>
<td>Buffalo-Westfield mile 468.1 EB</td>
<td>West</td>
<td>9.5 9.5 1.3</td>
<td>Ex. 59-60: 19,849</td>
<td>Chautauqua</td>
<td>Dunkirk</td>
<td>42° 27' 37.81&quot; -79° 18' 39.05&quot;</td>
<td>Rectang.</td>
<td>0-5</td>
<td>50</td>
</tr>
<tr>
<td>SB1</td>
<td>I-90</td>
<td>Syracuse-Manchester mile 349.4 WB</td>
<td>Genesee</td>
<td>2.7 2.7 0.26</td>
<td>Ex. 44-45: 59,938</td>
<td>Ontario</td>
<td>Victor</td>
<td>42° 59' 57.34&quot; 77° 24' 41.44&quot;</td>
<td>Narrow</td>
<td>15-30</td>
<td>100</td>
</tr>
<tr>
<td>SC1</td>
<td>I-90</td>
<td>Syracuse-Manchester Mile 320.3 EB</td>
<td>Central</td>
<td>6.4 6.4 1.04</td>
<td>Ex. 40-41: 35,240 Ex. 41-42: 35,937</td>
<td>Seneca</td>
<td>Tyre</td>
<td>42° 58' 01.20&quot; -73° 56' 06.00&quot;</td>
<td>Rectang.</td>
<td>0-5</td>
<td>200</td>
</tr>
</tbody>
</table>
5A1 - Buffalo - Westfield MP 468.1EB
5B1 - Syracuse - Manchester MP 349.4 WB
Thruway/Canal is identifying potential solar facility sites in the right-of-way. These sites are not to adversely affect highway safety, design, construction, maintenance, or the current highway stability. In addition, sites are not to interfere with or impair future highway expansion and also have minimal or no environmental impacts. The intent is to identify sites owned by Thruway/Canal that are:

- equal to or greater than 2 acres (available for solar arrays/infrastructure, e.g. beyond the clear zone),
- relatively flat (if sloped, gentle to moderate, with south facing aspect),
- visible but not distracting to highway users,
- no environmentally sensitive,
- not going to require mature tree stand removal,
- in close proximity to minimally a 3-phase power connection,
- not going to negatively impact any scenic, historic or environmentally-significant resource, and
- not going to interfere with or impair future expansion of the transportation facility.

Potential Solar Site Information

Division: **Buffalo**
Section: **Westfield**
Mile Post: **468.0**
County: **Chautauqua**
Town/City/Village: **Dunkirk**

Geographic coordinates (lat/long at parcel center point): **42°77'37.81" N / 79°18'39.05" W**

Area within site available for solar infrastructure (in acres): **9.39**

General shape: [ ] square or rectangular [x] discontinuous or irregular [ ] narrow or linear

What is the current site use and character? (e.g. exit loops, median, facility (rest area, travel plaza, open storage area, etc.), forested, brush, mowed/agricultural, utility access, park and ride, vacant, etc.) Describe:

Surrounding area character and predominant land use, check one:

[ ] Urban [x] Suburban [ ] Rural

What is the future (next 5-20 years) site plan (e.g. full reconstruction, lane expansion, rest area expansion, new ram system, etc.)? Briefly describe: None

Is there an unobstructed, safe access to the area from the highway, frontage road, connector or parallel roadway?

Check one: [x] Yes [ ] No

If yes, describe: Access road to Dunkirk salt shed.

Are there any unique geometric or design considerations, check one: [ ] Yes [x] No

**5A1 - Buffalo-Westfield MP 468.1EB**
Preliminary Solar Site Screening Worksheet
December 16, 2015

Topography:
Check one: X level (0-5%)  ☐ gentle (5%-15%)  ☐ moderate (15%-30%)  ☐ steep (>30%)

If other than level, what is the predominant slope aspect? ☐ North  ☐ South  ☐ East  ☐ West

Area electric utility company name: National Grid

Distance to nearest 3-phase power connection: 50 (see exhibit D) feet.

Distance to nearest power substation: 1.1 miles.

Are there any known or potentially sensitive environmental issues such as wetlands, protected stream corridors, floodplain, cultural resources, unique vegetation, threatened or endangered species/habitat, or hazardous material considerations at this site?
If yes describe: None

Additional site notes or comments (optional):

Inset a Google air photo/map (PDF, jpg, gif, screen shot, etc.) clearly indicating the location (include caption):

Solar site – Star symbol indicates wind turbine. Attached exhibit A.

Area businesses map – Attached exhibit B.

Sub-station – Approx. address location 10959 Bennett road (rt. 60). Attached exhibit C

3-phase power – Turbine shelter (50 ft.) TUB (750 ft.) Attached exhibit D

5A1 - Buffalo-Westfield MP 468.1EB
Thruway/Canal is identifying potential solar facility sites in the right-of-way. These sites are not to adversely affect highway safety, design, construction, maintenance, or the current highway stability. In addition, sites are not to interfere with or impair future highway expansion and also have minimal or no environmental impacts. The intent is to identify sites owned by Thruway/Canal that are:

- equal to or greater than 2 acres (available for solar arrays/infrastructure, e.g. beyond the clear zone),
- relatively flat (if sloped, gentle to moderate, with south facing aspect),
- visible but not distracting to highway users,
- no environmentally sensitive,
- not going to require mature tree stand removal,
- in close proximity to minimally a 3-phase power connection,
- not going to negatively impact any scenic, historic or environmentally-significant resource, and
- not going to interfere with or impair future expansion of the transportation facility.

**Potential Solar Site Information**

- Division: Syracuse
- Section: Manchester
- Mile Post: 349.4
- County: Ontario
- Town/City/Village: Victor

Geographic coordinates (lat/long at parcel center point): 

Area within site available for solar infrastructure (in acres): AROUND 2 ACRES

General shape: 

- square or rectangular
- discontinuous or irregular X narrow or linear

What is the current site use and character? (e.g. exit loops, median, facility (rest area, travel plaza, open storage area, etc.), forested, brush mowed, agricultural, utility access, park and ride, vacant, etc.) Describe:

Surrounding area character and predominant land use, check one:

- Urban
- Suburban
- Rural X

What is the future (next 5-20 years) site plan (e.g. full reconstruction, lane expansion, rest area expansion, new ram system, etc.)? Briefly describe: SAME AS TODAY

Is there an unobstructed, safe access to the area from the highway, frontage road, connector or parallel roadway?

Check one: X Yes No

If yes, describe:

TRUCK LANE AT SENeca SERVICE AREA

Are there any unique geometric or design considerations, check one: X Yes No

IT IS ON A SLIGHT HILL

5B1 - Syracuse-Manchester MP349.4WB
Preliminary Solar Site Screening Worksheet
December 16, 2015

Topography:
Check one: □ level (0-5%) □ gentle (5%-15%) X moderate (15%-30%) □ steep (>30%)

If other than level, what is the predominant slope aspect? □ North □ South X East □ West

Area electric utility company name: **UNKNOWN**

Distance to nearest 3-phase power connection: **100** feet.

Distance to nearest power substation: __________ miles. **NOT SURE**

Are there any known or potentially sensitive environmental issues such as wetlands, protected stream corridors, floodplain, cultural resources, unique vegetation, threatened or endangered species/habitat, or hazardous material considerations at this site? **NO**

If yes describe:

Additional site notes or comments (optional): **SEE PICTURE LABELED SENECA SA**

Inset a Google air photo/map (PDF, jpg, gif, screen shot, etc.) clearly indicating the location (include caption):

5B1 - Syracuse-Manchester MP349.4WB
Thruway/Canal is identifying potential solar facility sites in the right-of-way. These sites are not to adversely affect highway safety, design, construction, maintenance, or the current highway stability. In addition, sites are not to interfere with or impair future highway expansion and also have minimal or no environmental impacts. The intent is to identify sites owned by Thruway/Canal that are:

- equal to or greater than 2 acres (available for solar arrays/infrastructure, e.g. beyond the clear zone),
- relatively flat (if sloped, gentle to moderate, with south facing aspect),
- visible but not distracting to highway users,
- no environmentally sensitive,
- not going to require mature tree stand removal,
- in close proximity to minimally a 3-phase power connection,
- not going to negatively impact any scenic, historic or environmentally-significant resource, and
- not going to interfere with or impair future expansion of the transportation facility.

**Potential Solar Site Information**

Division: **Syracuse**  
Section: **Manchester**  
Mile Post: **320**

County: **SENeca**  
Town/City/Village: **TYRE**

Geographic coordinates (lat/long at parcel center point):  
See Photos

Area within site available for solar infrastructure (in acres): **5**

General shape:  
- [X] square or rectangular
- [ ] discontinuous or irregular
- [ ] narrow or linear

What is the current site use and character? (e.g. exit loops, median, facility (rest area, travel plaza, open storage area, etc.), forested, brush, mowed, agricultural, utility access, park and ride, vacant, etc.) Describe:  
**COVER LEAF**

Surrounding area character and predominant land use, check one:  

- [ ] Urban  
- [ ] Suburban  
- [X] Rural

What is the future (next 5-20 years) site plan (e.g. full reconstruction, lane expansion, rest area expansion, new ram system, etc.)? Briefly describe:  
**DON'T KNOW**

Is there an unobstructed, safe access to the area from the highway, frontage road, connector or parallel roadway?  
Check one:  
- [X] Yes  
- [ ] No

If yes, describe:  
**WATERLCO SALT SHED**

Are there any unique geometric or design considerations, check one:  

- [ ] Yes  
- [X] No
Preliminary Solar Site Screening Worksheet
December 16, 2015

Topography:
Check one: ☑ level (0-5%) ☐ gentle (5%-15%) ☐ moderate (15%-30%) ☐ steep (>30%)

If other than level, what is the predominant slope aspect? ☐ North ☐ South ☐ East ☐ West

Area electric utility company name: NYSFEG

Distance to nearest 3-phase power connection: 200 feet.

Distance to nearest power substation: ________ miles. NOT SURE

Are there any known or potentially sensitive environmental issues such as wetlands, protected stream corridors, floodplain, cultural resources, unique vegetation, threatened or endangered species/habitat, or hazardous material considerations at this site? NO

If yes describe:

Additional site notes or comments (optional): SEE PICTURE LABELED WATERLOOK

Inset a Google air photo/map (PDF, jpg, gif, screen shot, etc.) clearly indicating the location (include caption):

5C1 - Syracuse-Manchester MP 320.3 EB