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June 10, 2013

Vic Schroter
Director, Section 47.5 Environmental Protection Act
Environmental Approvals Branch
Ontario Ministry of the Environment
2 St Clair Ave W, Floor 12 A
Toronto ON M4V1L5

**Re: Renewable Energy Approval Amendment Application - Penn Energy – S. Glengarry_St.
Lawrence-1 Solar Farm**

Dear Mr. Schroter:

Canadian Solar Solutions Inc., on behalf of the South Glengarry Solar Farm Partnership, is pleased to present you with the attached application to amend REA #2189-8NQPZ5. We believe that this amendment is minor in nature as it does not increase any potential negative impacts of the project and does not expand the Project Location. This opinion was confirmed by the MOE in the e-mail from Nick Colella dated May 27, 2013. Included with the application are the following documents:

- REA Amendment Application Form
- A Project Modifications Document
- Original Site Plan
- Revised Site Plan
- *Acoustic Assessment Report, Penn Energy – South Glengarry_St.Lawrence-1 Solar Farm, May 10, 2013*
- Map showing the extent of the Natural Heritage Assessment study area
- Map showing the extent of the Archaeological Assessment.

We have been consulting with the MNR and MTCS about these proposed changes and have had confirmation from Paige Campbell (Archaeological Review Officer) stating:

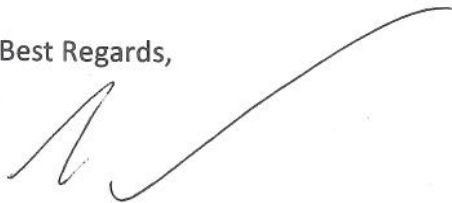
"I have gone over the maps and letter you sent me for the South Glengarry Solar Farm F-000627-SPV-130-505 and I agree that the proposed configuration changes do not in any way affect the validity of the archaeological assessment by Northeastern Archaeological Associates in 2010, nor is any further archaeological assessment required due to these changes."

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Details of any feedback from the MNR will be provided to the MOE as we receive it. In addition, All landowners within 120m of the project location, municipalities, and Aboriginal communities will be notified of the proposed changes as detailed in the above noted e-mail.

If you have any questions or require any further information, please do not hesitate to contact me.

Best Regards,



Terry Rasmussen
Project Manager – Solar Farms
Canadian Solar Solutions Inc.
T: 519 837 1881 x 2291
E: Terry.Rasmussen@canadiansolar.com

cc. Max Frable – PENN Energy
Tracey Hart, Cornwall Area Supervisor

General Information and Instructions

Form Version 1.1

General

Information requested in this form is collected under the authority of the *Environmental Protection Act*, R.S.O. 1990 (EPA) and will be used to evaluate this application for a Renewable Energy Project. Questions about this collection of information should be directed to: Information Unit Supervisor, Environmental Assessment and Approvals Branch, 2 St. Clair Ave. W, Floor 12A, Toronto ON M4V 1L5. Telephone outside Toronto 1-800-461-6290 or in Toronto 416-314-8001.

Instructions

1. Applicants are responsible for ensuring that they complete the most recent application form. Application forms and supporting documentation are available from the Environmental Assessment and Approvals Branch toll free at 1-800-461-6290 (locally at 416-314-8001), from your local District Office of the Ministry of the Environment, and in the "Publications" section of the Ministry of the Environment website at www.ene.gov.on.ca.
2. Questions regarding completion and submission of this application should be directed to the Environmental Assessment and Approvals Branch, 2 St. Clair Avenue West, Floor 12A, Toronto, Ontario, M4V 1L5, telephone number 1-800-461-6290 or (416) 314-8001, or to your local District Office of the Ministry of the Environment.
3. **Complete Submission**
In order to be eligible for the issue of a renewable energy approval, a person who proposes to engage in a renewable energy project shall, before submitting an application to the Director,
 - 1) prepare the application in a form or format approved by the Director;
 - 2) obtain or prepare, as the case may be, any documents that,
 - a) are required under Part IV to be submitted as part of the application, or
 - b) are to be submitted as part of the application for the purposes of obtaining an exemption from a provision of Part V; and
 - c) comply with all other requirements of Part IV of Ontario Regulation 359/09.
 - 3) If there is more than one person applying for the issue of a renewable energy approval in respect of a renewable energy project, those persons shall jointly submit one application for the issue of a renewable energy approval.
 - 4) An application to alter the terms and conditions of a renewable energy approval shall be prepared in a form or format approved by the Director and shall be submitted to the Director.

Supporting documents

- 1) A person who proposes to engage in a renewable energy project shall submit a document set out in Column 1 of Table 1 of the Regulation as part of an application for the issue of a renewable energy approval in respect of the project if it is a project described opposite the document in Column 3.
- 2) If a document set out in Column 1 of Table 1 of the Regulation is submitted as part of an application for the issue of a renewable energy approval, the person who is engaging in the renewable energy project shall ensure that the document meets the requirements set out opposite the document in Column 2 of Table 1 of the Regulation.
- 3) Any document submitted as part of an application for the issue of a renewable energy approval shall be in writing.
- 4) Any document submitted as part of an application for the issue of a renewable energy approval that is a diagram, map or plan shall be drawn to scale and shall include a scale bar and a north arrow.

INCOMPLETE APPLICATIONS WILL BE RETURNED TO THE APPLICANT.

The Ministry may require additional information during the technical review of any application.

4. If you are submitting your application electronically, electronic PDF application form should be completed and submitted by email to REAESubmission@ontario.ca. Once the application has been received, you will receive an acknowledgement email with an MOE reference number for your application and additional instructions for submitting your hard copy application package and supporting information.

If you are not submitting your application electronically, the original application form and all required supporting documents must be sent to:

**The Ministry of the Environment,
Director, Environmental Assessment and Approvals Branch,
2 St. Clair Avenue West, Floor 12A, Toronto, Ontario, M4V 1L5**

A copy of the complete application must be sent to any local Ministry District Office having jurisdiction over the project location. To locate the appropriate local Ministry District Office, please visit the Ministry of the Environment Internet site at:
www.ene.gov.on.ca/environ/ora/op.htm#Reg/Dist

A cover letter addressed to the Director of Environmental Assessment and Approvals Branch should accompany both submissions and indicate that a copy of the complete submission has been sent to each District Office that has jurisdiction over the project location.

5. Information collected by the Ministry of the Environment is subject to the *Freedom of Information and Protection of Privacy Act* (FOIPPA). If you are of the view that any part of your application is confidential on the grounds such information constitutes a trade secret or scientific, technical, commercial, financial or labour relations information, please make this known now. Otherwise, the Ministry may make the information available to the public without further notice to you.

Application for Approval of a Renewable Energy Project

Ce formulaire est disponible en français

For Office Use Only		
Reference Number	Date (y/m/d)	Initials

Form ID: 2910805

Application Summary

☒ **Project Name** (Project identifier to be used as a reference in correspondence)

Penn Energy - S. Glengarry_St. Lawrence-1

☒ **Project Description Summary**
(This summary should reflect the description in the documents upon which consultation has been completed and if it does not, the difference should be highlighted)

Please see original REA application submitted July 7, 2011.

Required Information	Completed (yes or no)
☒ Project Name & Description	Yes
☒ Section 1: Applicant Information	Yes
☒ Section 2: Project Information	Yes
☒ Section 3: Site Information	Yes
☒ Section 4: Required Documents	Yes

Application Status: FORM COMPLETE.

Summary:

Type of Application Amendment to REA 2189-8NQPZ5	Type of Renewable Energy Generation Facility Solar Photo Voltaic Class 3.
Total Maximum Name Plate Capacity 10 MW	
Total Expected Generation Capacity 10 MW	

Section 1: Applicant Information

Form ID: 2910805

✓ 1.1 Applicant Information (Owner of works/facility)

Applicant Name (legal name of individual or organization as evidenced by legal documents) South Glengarry Solar Farm Partnership		Business Identification Number 22 074 6994
Business Name (the name under which the entity is operating or trading - also referred to as trade name) South Glengarry Solar Farm Partnership		☒ same as Applicant Name
Applicant Type: ☐ Corporation ☐ Federal Government ☐ Individual ☐ Municipal Government ☒ Partnership ☐ Provincial Government ☐ Sole Proprietor ☐ Other (describe):		North American Industry Classification System (NAICS) Code 221119 Other Electric Power Generation
Business Activity Description (a description of the business endeavour, this may include products sold, services provided or machinery/equipment used, etc.)		

✓ 1.2 Applicant Physical Address

Civic Address - Street information (includes street number, name, type and direction) 1 Yonge Street		Unit Identifier (i.e. apartment number) Suite 1801	
Survey Address (Not required if Street Information is provided)	Lot	Conc.	Part
Municipality /Unorganized Township Toronto	County/District	Province/State Ontario	Country Canada
Postal Code M5E 1W7			
Telephone Number (include area code & ext.) (610)668-0300 ext.	Fax Number (include area code) (610)668-0365	Mobile Number (include area code)	E-mail Address

✓ 1.3 Applicant Mailing Address

Same as Applicant Physical Address? ☐ Yes ☒ No (If no, please provide site address information below)			
Civic Address - Street information (civic numbering and street information including street number, name, type and direction) 620 Righters Ferry Road		Unit Identifier (i.e. apartment number)	
Delivery Designator	Delivery Identifier	Postal Station	
Municipality /Unorganized Township Bala cynwyd	Province/State Pennsylvania	Country USA	Postal Code 19004

✓ 1.4 Statement of Applicant

I, the undersigned hereby declare that, to the best of my knowledge:		
- The information contained herein is complete and accurate in every way and I am aware of the penalties against providing false information as per s.184(2) of the Environmental Protection Act. - I understand that by submitting this form, I am guaranteeing the completeness and accuracy of all the information provided on this form and included in the draft reports. Failure to submit the correct information will result in an incomplete application being returned. - The Project Technical Information Contact identified below is authorized to act on my behalf for the purpose of obtaining approval under section 47.3 of the EPA for the Project identified herein.		
Name of Signing Authority (please print) Glen Tomkinson		Title Project Manager/REA Coordinator
Telephone Number (including area code & extension) (610)668-0300 ext. 1000	Fax Number (including area code) (610)668-0365	E-mail Address glen@pennenergyrenewables.com
Mobile Number (including area code) (484)888-3107	Signature Glen Tomkinson / VAC	Date (y/m/d) 13/6/17

Section 2: Project Information

Form ID: 2910805

2.1 Application Type

Type of Application: ☐ New Renewable Energy Approval ☒ Amendment to Renewable Energy Approval				Where Applicable provide Existing Renewable Energy Approval Number: <u>2189-8NQPZ5</u>			
Application Initiated by: ☒ Proponent ☐ Environmental Assessment and Approvals Branch ☐ Provincial Officer Order (attach copy) ☐ Other (specify): _____							
Current Certificate(s) of Approval (please attach a separate list if more space is required)							
Certificate of Approval Number		Date of Issue (yyyy/mm/dd)		Certificate of Approval Number		Date of Issue (yyyy/mm/dd)	
Certificate of Approval Number		Date of Issue (yyyy/mm/dd)		Certificate of Approval Number		Date of Issue (yyyy/mm/dd)	
Current Permit(s) to Take Water (please attach a separate list if more space is required)							
Permit Number		Date of Issue (yyyy/mm/dd)		Permit Number		Date of Issue (yyyy/mm/dd)	
Permit Number		Date of Issue (yyyy/mm/dd)		Permit Number		Date of Issue (yyyy/mm/dd)	
Project Schedule Estimated date for start of construction/installation (yyyy/mm/dd): <u>2012/11/01</u> Estimated date for start of operation (yyyy/mm/dd): <u>2013/09/13</u>							

2.2 Statement of Project Technical Information Contact

Is the Project Technical Information Contact the same as the Applicant (identified in Section 1)? ☒ Yes ☐ No			
I, the undersigned hereby declare that, to the best of my knowledge: • The information contained herein and the information submitted in support of this application (electronically and in hard copy) is complete and accurate in every way and I am aware of the penalties against providing false information as per s.184(2) of the <i>Environmental Protection Act</i>. • I understand that by submitting this form, I am guaranteeing the completeness and accuracy of this form and the draft documents. Failure to submit the correct information will result in the application being returned as incomplete. • That the information contained in the electronically submitted application form is the same as the information submitted in the hard copy submission. • I have used the most recent application form (as obtained from the "publications" section of the Ministry of the Environment website at www.ene.gov.on.ca or from the Environmental Assessment and Approvals Branch at 1-800-461-6290).			
Name of Project Technical Information Contact		Company	
<u>Glen Tomkinson</u>		<u>N/A</u>	
Telephone Number (include area code & ext.)	Fax Number (include area code)	Mobile Number (include area code)	E-mail Address
<u>(610)668-0300</u> ext. <u>1000</u>	<u>(610)668-0365</u>	<u>(484)888-3107</u>	<u>glen@pennenergyrenewables.com</u>
Signature (hard copy submission MUST be signed)		Date (yyyy/mm/dd)	
<u>Glen Tomkinson / UATZ</u>		<u>2013/06/07</u>	
Address Information: Same as Applicant Mailing Address? ☒ Yes ☐ No (If no, please provide technical information contact address information below)			
Civic Address - Street information (civic numbering and street information including street number, name, type and direction)			Unit Identifier (i.e. apartment number)
<u>620 Righters Ferry Road</u>			
Delivery Designator	Delivery Identifier	Postal Station	
Municipality /Unorganized Township	Province/State	Country	Postal Code
<u>Bala cynwyd</u>	<u>Pennsylvania</u>	<u>USA</u>	<u>19004</u>

☒ **2.3 Other Approvals for Facility** – Please attach a separate list if more space is required

Separate list attached?

☐ Yes☒ No

List all other environmental approvals/permits applied for related to this project or received in relation to this project

Approval Number	Approval Date (yyyy/mm/dd)	Approval Number	Approval Date (yyyy/mm/dd)	Approval Number	Approval Date (yyyy/mm/dd)

Ontario Power Authority (OPA) Registration ID (if applicable) FIT-Z958C	Ontario Power Authority (OPA) Reference Number (if applicable) FIT-F3AP3XM
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☒ **2.4 Type of Renewable Energy Generation Facility** (select all that apply)

Wind Facility	Biofuel / Biogas / Other	Anaerobic Digestion Facility	Thermal Treatment Facility	Solar Photo Voltaic Facility
☐ Class 2	☐ Biofuel	☐ Class 1	☐ Class 1	☒ Class 3
☐ Class 3	☐ Biogas	☐ Class 2	☐ Class 2	
☐ Class 4	☐ Other	☐ Class 3	☐ Class 3	
☐ Class 5	If other, please describe:			

☒ **2.5 Generation of Electricity**

Total Maximum Name Plate Capacity 10.0 MW (1 MW = 1000 kW / 1 kW = 0.001 MW)	Total Expected Generation Capacity 10.0 MW (1 MW = 1000 kW / 1 kW = 0.001 MW)
Days and Hours of Operation 24 hours a day, 7 days a week	

Section 3: Site Information

Form ID: 2910805



3.1 Project Location - (the site/location where project will be located)

Same as Applicant Physical Address? ☐ Yes ☒ No (If no, please provide site address information below)					
Civic Address- Street information (includes street number, name, type and direction)					Unit Identifier (i.e. apartment number)
18423 County Road 19, 18461 County Road (adjoining properties)					
Survey Address (Legal description of the site)	Lot	Conc.	Part	Reference Plan	
	40, 41, 41a	5IL	NA	Judge's Plan 107	
Municipality / Unorganized Township	County/District		Postal Code		
Township of South Glengarry	Stormont dundas & glengarry		K0C 2J0		
Non Address Information (where the project spans many locations or a large rural area, specify how the project area relates to the address provided)					
Please see original REA application submitted July 7, 2011.					
Map Datum	Zone	Geo Reference (southwest corner of property)	Accuracy Estimate	Geo Referencing Method	UTM Easting
NAD83	18		n/a	Delorme XMap	524722
					UTM Northing
					4994560



3.2 Municipal or local authority Information - (List all municipal or board authorities where the project is located)

Local Municipality / Unorganized Township (Include each Single Tier or Lower Tier in which the project location is situated. Attach a separate list if more space is necessary)		
Name of Municipality	Address	Phone
Township of South Glengarry	6 Oak Street, P.O. Box 220, Lancaster, ON K0C 1N0	(613)347-1166
Clerk's Name	Clerk's Phone/Fax	E-Mail Address
Marilyn Lebrun	(613)347-1166	marilyn@southglengarry.com
Is the project location situated in one or more Upper Tier Municipality? (i.e., county, regional or district municipality.) ☒ Yes ☐ No		
List all Upper Tier Municipalities that the project location is situated in. Attach a separate list if more space is necessary		
Name of Municipality	Address	Phone
United Counties of Stormont, Dundas & Glengarry	26 Pitt Street, Suite 323 Cornwall, ON K6J 3P2	(800)267-7158
Clerk's Name	Clerk's Phone/Fax	E-Mail Address
Helen Thomson	(613)932-1515	hthomson@sdgounties.ca
Is the project location situated in a Local Roads Area? ☐ Yes ☒ No		
List all Local Roads Areas that the project location is situated in. Attach a separate list if more space is necessary		
Name of local roads board	Address	Phone
Secretary-treasurer's Name	Secretary-treasurer's Phone/Fax	E-Mail Address
Is the project location in a Local Service Board area? ☐ Yes ☒ No		
List all Local Service Board areas the project location is situated in. Attach a separate list if more space is necessary		
Name of Local Service Board	Address	Phone
Secretary's Name	Secretary's Phone/Fax	E-Mail Address


3.3 Site Information - (information about the site/location where project will be located)

Site Name South Glengarry Solar Farm	MOE District Office Cornwall Area Office
Is in any portion of the Project location on federally owned land or a reserve? ☐ Yes ☒ No	
Is in any portion of the Project location on Crown Land? ☐ Yes ☒ No	
Is the Project location that is the subject of this application owned by the Applicant? ☒ Yes ☐ No <i>If no, please attach the owner's name, address and a signed letter granting consent for the installation and operation of the facilities</i>	
Is the Applicant the operating authority of the facility that is the subject of this application? ☒ Yes ☐ No <i>If no, please attach the operating authority name, address and phone number</i>	
Is the Project location in the area of the Niagara Escarpment Plan? ☐ Yes ☒ No	
Is the Project location in the area subject to the Oak Ridges Moraine Conservation Plan? ☐ Yes ☒ No	
Is the Project location in the Protected Countryside as shown in Schedule 1 to the Greenbelt Belt Plan? ☐ Yes ☒ No	
Is the Project location in the Lake Simcoe Watershed as defined in the Lake Simcoe Protection Act, 2008? ☐ Yes ☒ No	
Is the Project location in the Central Pickering Development Planning Area as shown in Schedule 1 to the Central Pickering Development Plan? ☐ Yes ☒ No	
Has an Archaeological Report (s. 22) been prepared as part of the complete submission? ☒ Yes ☐ No	
Has a Heritage Report (s.23) been prepared as part of the complete submission? ☒ Yes ☐ No	
Has an Environmental Impact Study Report (s.38, s. 41 or s. 43) been prepared as part of the complete submission? ☒ Yes ☐ No	
Has a Water body Report (s.39, s. 40, s.44 s. 45) been prepared as part of the complete submission? ☒ Yes ☐ No	

Form ID: 2910805

☒

***Please note:** the release of information contained in application forms and documentation submitted in support of applications for approval is subject to the provisions of the *Freedom of Information and Protection of Privacy Act*. This Act defines what may and may not be disclosed to the public, and is used to assess all requests for information contained in the documents on file with an application for approval. The information submitted with an application for approval may also be subject to the *Environmental Bill of Rights*. In those situations, the application and the associated non-confidential supporting documentation is made available for review by members of the public. The applicants should therefore identify all documents or portions of documents as noted above which are to be considered confidential and must provide detailed evidence in support of this claim. This evidence will be one of the factors the ministry would consider when making a decision regarding disclosure of specific documents on file.



SOUTH GLENGARRY SOLAR FARM PARTNERSHIP

Penn Energy – S. Glengarry_St. Lawrence-1 Solar Farm

Project Modification Document

Proposed Amendments to REA Number 2189-8NQPZ5

**Submitted by Canadian Solar Services Inc. on behalf of the South
Glengarry Solar Farm Partnership**

Date Submitted: June 10, 2013



SOUTH GLENGARRY SOLAR FARM PARTNERSHIP

Introduction

Canadian Solar Solutions Inc., on behalf of the South Glengarry Solar Farm Partnership, is applying for an amendment to the REA Number 2189-8NQPZ5. The changes to the project design are minor in nature and result in a reduction of environmental impacts and potential noise impacts. The project location has not changed from the original permitted area. Details of the changes, the rationale behind the changes and any potential impacts are described below.

Proposed Changes and Rational:

Details of the proposed changes are discussed below listing the change, the rationale behind the change and any potential impacts to the environment

1. Change in inverter and transformer types to less noisy models. The original inverter type, Xantrex GT-500 (500 kW each) by Schneider Electric, will be replaced with Advanced Energy Solaron 500 HE inverters. Transformers will switch from Schneider Electric transformers to ones manufactured by ABB Inc.

Rationale – To reduce any potential noise impacts to adjacent noise receptors.

Additional Negative Impacts to the Environment – None. This will result in a net reduction of noise.

2. Removal of fan from inverter stations as these are no longer required.

Rationale – To reduce any potential noise impacts

Additional Negative Impacts to the Environment – None. This will result in a net reduction of noise.

3. Change in transformer substation location. Moved to north and east of original location

Rationale – Moved further away from receptors. Completed to meet engineering requirements as well as to reduce noise impacts.

Additional Negative Impacts to the Environment – None. This will result in a net reduction of noise.

4. Change in inverter station locations.

Rationale – Facility redesigned to better match existing topography and to reduce grading of the site.

Additional Negative Impacts to the Environment – None.

5. Change in internal road locations and reduction in road length and coverage

Rationale – Facility redesigned to better match existing topography and reduce grading.

Additional Negative Impacts to the Environment – None. Reduction in road surface coverage will also reduce storm water runoff.



SOUTH GLENGARRY SOLAR FARM PARTNERSHIP

6. Change in module racking and panel locations

Rationale – Facility redesigned to better match existing topography and reduce grading.

Additional Negative Impacts to the Environment – None

7. Change in grid interconnection point

Rationale – Required by Hydro One (HONI) for interconnection

Additional Negative Impacts to the Environment – None

Reports Requiring Revisions:

The proposed amendments listed above will require minor changes to the Design & Operations Report and the Site Plan. The changes are listed in Table 1 below.

MNR/MTCS Approval

The project location boundary for the Penn Energy – S. Glengarry_St. Lawrence-1 Solar Farm is not proposed to change with this amendment. The areas studied in the Natural Heritage and Archaeological Assessments encompass the project location boundary (see attached) and as such, the clearance letters previously provide by the MNR and MTCS are still valid.

MNR: The proposed changes to the facility will all remain within the same Project Location Boundary as the original facility which will result in no new direct impacts to natural features. This combined with an overall reduction in noise and stormwater flow will result in fewer impacts than originally proposed.

MTCS: No archaeological resources we encountered during the Stage 2 assessment of the property. The proposed changes to the facility will all remain within the same Project Location Boundary as the original facility which will result in no impacts to archaeological features.

SOUTH GLENGARRY SOLAR FARM PARTNERSHIP

Table 1: Revisions/Updates to REA Documents

Report	Page/Section	Original Text	Revised Text	MTCS and MNR comments
Project Description Report	No changes to this document are proposed. There are no changes to the description of the project, project location and there are no new potential negative environmental effects or increases to existing potential negative environmental effects.			
Design & Operations Report	Page 8, Section 3.0 – Table 1 “Inverters”	Xantrex GT-500 (500 kW each) by Schneider Electric, or similar	Solaron 500 HE (approximately 500 kW each) by Advanced Energy, or similar	
	Page 8, Section 3.0 – Table 1 “Secondary Transformers”	Class 7230 Pad-Mounted Small Power transformer (208 V to 27.6 kV) by Schneider Electric, or similar	Class 7230 Pad-Mounted Small Power transformer (208 V to 27.6 kV) by ABB, or similar	
	Page 8, Section 3.0 – Table 1 “Primary Transformers”	Class 7240 Substation Small Power transformer (27.6 kV to 44 kV) by Schneider Electric, or similar utilizing biodegradable transformer oil.	Class 7240 Substation Small Power transformer (27.6 kV to 44 kV) by ABB, or similar utilizing biodegradable transformer oil.	
	Page 9, Section 3.1	10-15 collection houses are anticipated	10 collection houses are anticipated	
	Page 13, Section 4.4.4	None. The <i>Acoustic Assessment Report</i> by HGC Engineering concluded the following... “The acoustic measurements and analysis indicate that the predicted sound levels of the facility will be within the applicable sound level limits specified in MOE guidelines	None. The <i>Acoustic Assessment Report</i> by HGC Engineering on May 10, 2013 concluded the following... “The acoustic analysis indicates that the predicted sound levels of both the South Glengarry and adjacent Cornwall solar facilities will be within the applicable sound level limits specified in	

June 10, 2013

SOUTH GLENGARRY SOLAR FARM PARTNERSHIP

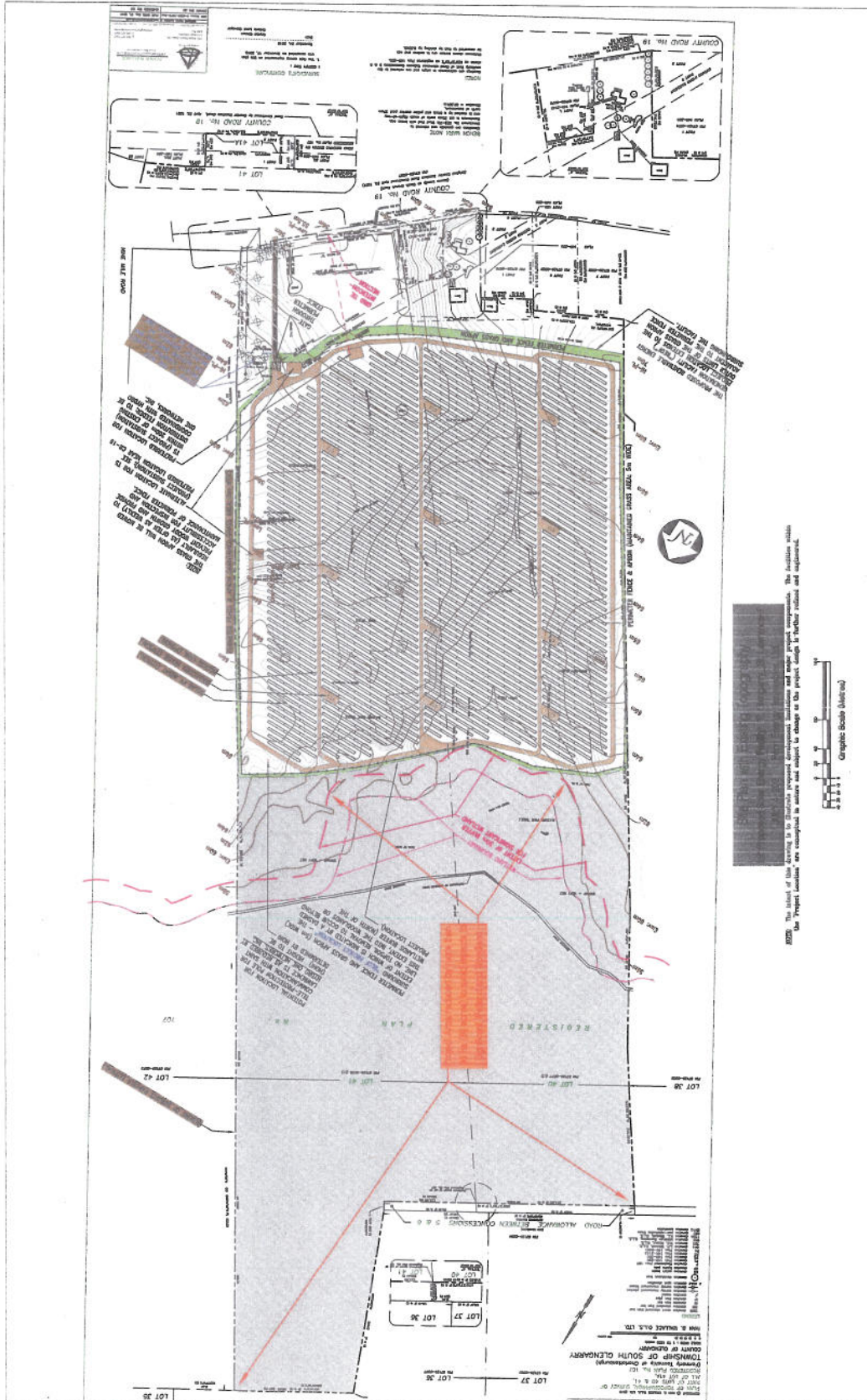
Report	Page/Section	Original Text	Revised Text	MTCS and MNR comments
		<i>NPC-232, during all hours of the day and night, under typical 'predictable worst case' operating conditions at all identified existing off-site receptor locations, with the benefit of the noise control measures specified (i.e. equipping ventilation air inlets and outlets on three of the collection houses with acoustic hoods).</i>	<i>MOE guidelines NPC-232, during all hours of the day and night, under typical 'predictable worst case' operating conditions at all identified existing off-site receptor locations.</i>	
	Page 15, Section 5.1 – Table 2 “Noise”	As evidenced in the report, the prescribed noise limits will be adhered to via careful siting of the suspect equipment adequately distanced from any receptors.	As evidenced in the report, the prescribed noise limits will be adhered to via careful siting of the suspect equipment and by the selection of low-noise equipment which is adequately distanced from any receptors.	
Construction Plan Report	No changes to this document are proposed. The proposed changes will not alter the construction practices and will not result in new potential negative environmental effects or increases to existing potential negative environmental effects			
Decommissioning Plan Report	No changes to this document are proposed. The proposed changes will not alter the decommissioning practices and will not result in new potential negative environmental effects or increases to existing potential negative environmental effects			
Acoustic Assessment Report	Report has been revised to account for lower noise profiles of equipment as well as to incorporate the adjacent solar facility. Please refer to the <i>Acoustic Assessment Report</i> by HGC Engineering on May 10, 2013			

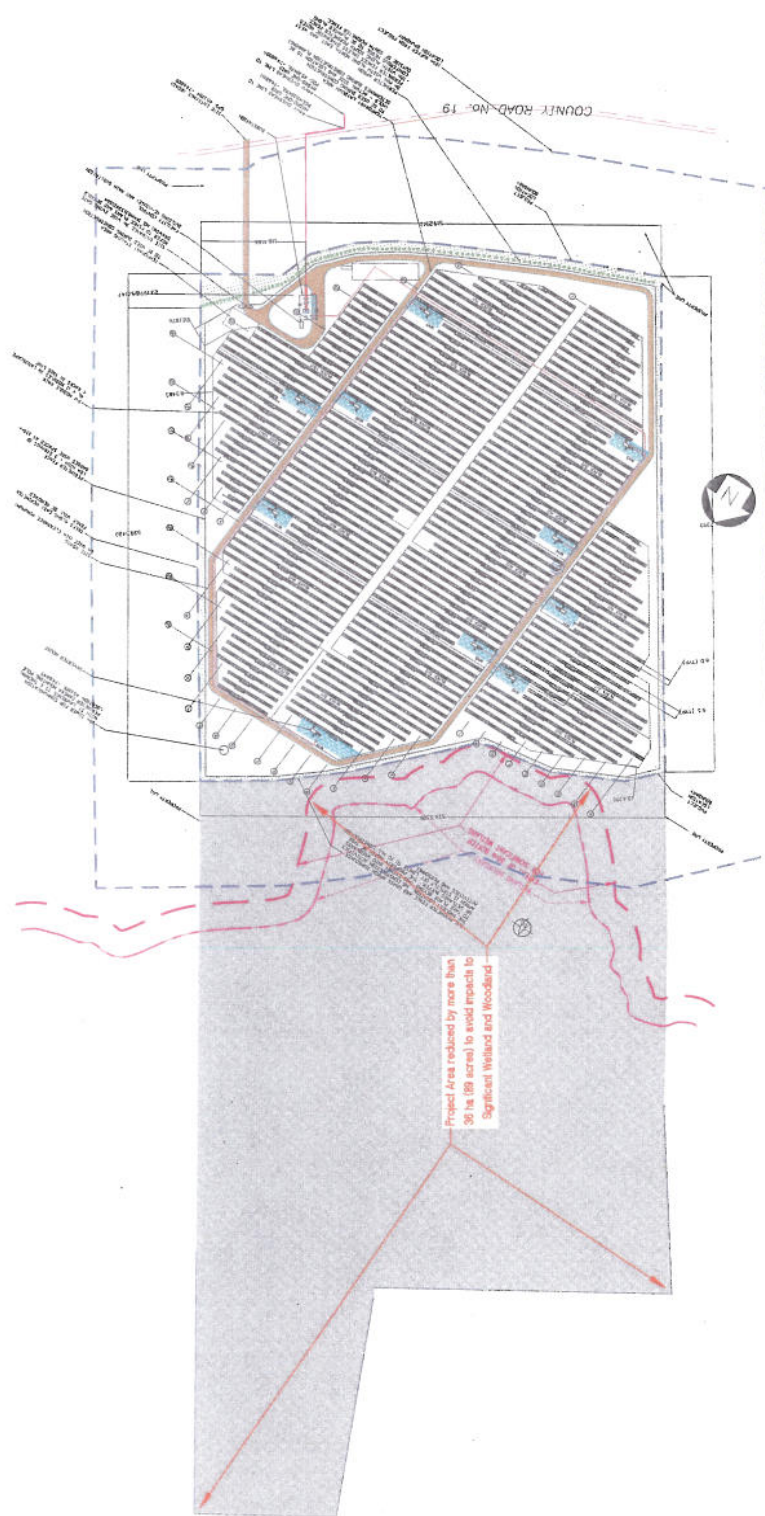
June 10, 2013

SOUTH GLENGARRY SOLAR FARM PARTNERSHIP

Report	Page/Section	Original Text	Revised Text	MTCS and MNR comments
Archaeological Assessment		No changes to this document are proposed. All proposed changes are within the existing study limits and will not result in an increased risk to known archaeological resources.		
Natural Heritage Assessment		No changes to this document are proposed. All proposed changes are within the existing study limits and will not result in an increased risk to natural heritage features.		

June 10, 2013





Site Plan

May 27, 2013 P. Penn Energy Renewables, Ltd.

may 27, 2013 5 East Liberty Holdings, Ltd.



Howe Gastmeier Chapnik Limited
2000 Argentia Road, Plaza One, Suite 203
Mississauga, Ontario, Canada L5N 1P7
t: 905.826.4044

ACOUSTIC ASSESSMENT REPORT

PENN ENERGY – S. GLENGARRY_ST. LAWRENCE-1 SOLAR FARM

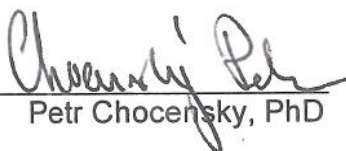
Dundas and Glengarry, Ontario

FIT Contract ID# F-000627-SPV-130-505
Renewable Energy Approval No. 2189-8NQPZ5

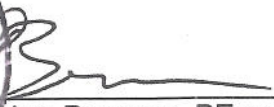
Prepared for:

South Glengarry Solar Farm Partnership
620 Righters Ferry Road,
Bala Cynwyd, PA, 19004
USA

Prepared by


Petr Chocensky, PhD

Reviewed by

The seal is circular with the text "LICENSED PROFESSIONAL ENGINEER" around the top and "PROVINCE OF ONTARIO" around the bottom. In the center, it reads "I. R. BONSMAS" and "100100550". Below the seal, the date "10-May-13" is stamped.

Ian Bonsma, PEng

May 10, 2013



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www.hgcengineering.com

VERSION CONTROL

Penn Energy – S. Glengarry_St. Lawrence-1 Solar Farm, 18423 & 18461 County Road 19,
South Glengarry, United Counties of Stormont, Dundas and Glengarry, Ontario

Ver.	Date	Version Description	Prepared By
1	18-Apr-2011	Draft Acoustic Assessment Report supporting an application for a Renewable Energy Approval	P. Chocensky
2	7-Jul-2011	Original Acoustic Assessment Report supporting an application for a Renewable Energy Approval; revised main transformer location	P. Chocensky
3	7-Dec-2011	Updated Acoustic Assessment Report addressing MOE requirement to include additional receptor locations	P. Chocensky
4	10-May-2013	Updated Acoustic Assessment Report in support of a Renewable Energy Approval addressing updated site layout, updated equipment selection, and information regarding an adjacent proposed solar plant	P. Chocensky



EXECUTIVE SUMMARY

Penn Energy Renewables Ltd., as assigned to South Glengarry Solar Farm Partnership by its subcontractor, ABB Inc., retained HGC Engineering to update an Acoustic Assessment of their proposed South Glengarry Solar Plant in South Glengarry, United Counties of Stormont, Dundas and Glengarry, Ontario. The study is required in support of an application for a Renewable Energy Approval from the Ontario Ministry of The Environment, under the Renewable Energy Act (“REA”). The assessment considers all non-negligible sound sources currently proposed for use at the facility, and has been prepared in accordance with the Ontario Ministry of the Environment publication “Basic Comprehensive Certificates of Approval (AIR) – User Guide”.

Previously, HGC Engineering issued a number of Acoustic Assessment Reports for the Glengarry site, addressing upcoming requirements from the Ministry of the Environment, as well as progress in the site design.

Sound emissions from key items of proposed equipment were based on information provided by the equipment manufacturers and established prediction methods for the transformers. The source sound levels were used as input to a predictive acoustical model to quantify the sound emissions associated with the facility.

The predictive analysis indicates that the sound emissions of the facility will be within the sound level limits as set out in MOE guideline NPC-232 during normal ‘predictable worst case’ operations at the nearest residential receptors.



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APPENDIX A –	Acoustic Assessment Summary Tables
APPENDIX B –	Zoning Maps
APPENDIX C –	Equipment Sound Data
APPENDIX D –	Details of Predictive Acoustical Modeling
APPENDIX E –	Acoustic Assessment Criteria
APPENDIX F –	Sample Calculation Results – Condensed, Overall dBA Format
APPENDIX G –	Sample Calculation Results – Octave Band Format

ACOUSTIC ASSESSMENT REPORT CHECK-LIST

Company Name: South Glengarry Solar Farm Partnership

Company Address: 620 Righters Ferry Rd
Bala Cynwyd, USA 19004

Location of Facility: 18423 & 18461 County Road 19, South Glengarry
United Counties of Stormont, Dundas & Glengarry, Ontario

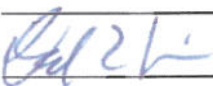
The attached Acoustic Assessment Report was prepared in accordance with the guidance in the ministry document "Information to be Submitted for Approval of Stationary Source of Sound" (NPC 233) dated October 1995 and the minimum required information identified in the check-list on the reverse of this sheet has been submitted.

Company Contact:

Name: David Savoia

Representing: South Glengarry Solar Farm Partnership

Phone Number: 610-668-0300

Signature: 

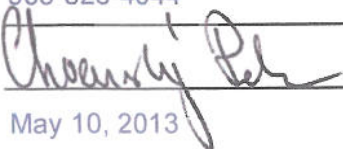
Date: May 10, 2013

Technical Contact:

Name: Petr Chocensky, PhD

Representing: HGC Engineering

Phone Number: 905-826-4044

Signature: 

Date: May 10, 2013

ACOUSTIC ASSESSMENT REPORT CHECK-LIST

Required Information		Submitted	Explanation/Reference
1.0	Introduction (Project Background and Overview)	☒ Yes	Section 1
2.0	Facility Description		
	2.1 Operating hours of facility and significant Noise Sources	☒ Yes	Section 2
	2.2 Site Plan identifying all significant Noise Sources	☒ Yes	Figure 3
3.0	Noise Source Summary		
	3.1 <i>Noise Source Summary Table</i>	☒ Yes	Appendix A
	3.2 Source noise emissions specifications	☒ Yes	Appendix A
	3.3 Source power/capacity ratings	☒ Yes	Appendix A
	3.4 Noise control equipment description and acoustical specifications	☐ Yes	N/A
4.0	Point of Reception Noise Impact Calculations		
	4.1 <i>Point of Reception Noise Impact Table</i>	☒ Yes	Appendix A
	4.2 Point(s) of Reception (POR) list and description	☒ Yes	Section 4
	4.3 Land-use Zoning Plan	☒ Yes	Appendix B
	4.4 Scaled Area Location Plan	☒ Yes	Figure 1
	4.5 Procedure used to assess noise impacts at each POR	☒ Yes	Appendix D
	4.6 List of parameters/assumptions used in calculations	☒ Yes	Appendix D
5.0	Acoustic Assessment Summary		
	5.1 <i>Acoustic Assessment Summary Table</i>	☒ Yes	Appendix A
	5.2 Rationale for selecting applicable noise guideline limits	☒ Yes	Appendix E
	5.3 Predictable Worst Case Impacts Operating Scenario	☒ Yes	Figures 4
6.0	Conclusions		
	6.1 Statement of compliance with selected noise performance limits	☒ Yes	Sections 6 & 7
7.0	Appendices (provide details such as)	☒ Yes	
	Listing of Insignificant Noise Sources	☐ Yes	N/A
	Manufacturer's Noise Specifications	☒ Yes	Appendix C
	Calculations	☒ Yes	Appendices F & G
	Instrumentation	☐ Yes	N/A
	Meteorology during Sound Level Measurements	☐ Yes	N/A
	Raw Data from Measurements	☐ Yes	N/A
	Drawings (Facility / Equipment)	☒ Yes	Figure 3, Appendix C

1 INTRODUCTION

1.1 Context

The South Glengarry Solar Plant will be located at 18423 and 18461 County Road 19 in South Glengarry, Ontario. A scaled location map of the surrounding area is included as Figure 1. The purpose of this assessment is to evaluate the sound emissions of the facility under a predictable worst case operating scenario, which is defined as an hour when typical full operation of the stationary sources under consideration could coincide with an hour of low background sound.

This report has been prepared in accordance with the Ontario Ministry of The Environment (“MOE”) guideline documents NPC-233 “Information to be Submitted for Approval of Stationary Sources of Sound”, dated October 1995 [Ref. 1], and “Supporting Information for the Preparation of an Acoustic Assessment Report”, dated November 2003 [Ref. 2].

A zoning map identifying the land uses surrounding the subject facility, obtained from the Township of South Glengarry, is included as Appendix B. The lands surrounding the South Glengarry Solar Plant are generally zoned for rural and agricultural use. Forty four points of reception have been considered in this assessment in order to represent the existing residential dwellings and vacant lots, which permit noise-sensitive use, within 1000 m of the proposed equipment at the solar facility, labelled as locations R01 through R44 in Figure 2. Two houses (marked as locations O1 and O2 in Figure 2), located on the property/parcel of the project, are owned by the proponent and have not been included in this assessment pursuant to Ontario Regulation 359/09 [Ref. 3].

HGC Engineering visited the site and surrounding area on March 14, 2011. The proposed site is rural in nature, both acoustically and in general character, with agricultural land uses widely in evidence, including scattered dwellings near the major roadways. Therefore, the area is best characterized as a “Class 3” rural area, under MOE noise assessment guidelines.

1.2 Summary of Updates Addressed In This Assessment

The updates addressed in this report include:

- Updated site layout of the South Glengarry Solar Plant,



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- Updated number of inverters on-site; there will be a total of nineteen inverters at the facility, installed in ten inverter houses,
- Updated source sound levels for inverters and transformers, reflecting the final equipment selection,
- Removal of inverter house ventilation fans,
- Evaluation of the sound level impact from a proposed neighboring solar plant project (Cornwall Solar Project).

2 FACILITY DESCRIPTION

The South Glengarry Solar Farm is a proposed 9.33 MW solar electrical generation project. The facility will consist of numerous fixed array mounted solar panels, ten collection houses, and one primary transformer. The sound sources associated with the facility will be the collection houses, each of which typically includes two inverter units and a secondary 1 MVA transformer.

Additionally, there will one primary 10 MVA transformer at the site. The inverters are power semiconductor devices which synthesize alternating current ("A/C") from the direct current produced by the solar panels. The solar panels themselves are passive, direct current devices and do not produce sound. They are thus not considered as sources in this assessment.

The inverter units will typically operate during hours when daylight is available. However, the transformers will be energized throughout the 24 hour period. Since daylight can occur during some hours of the nighttime period (19:00 – 7:00), the facility was assumed to operate fully during both daytime (7:00 – 19:00) and nighttime hours (19:00 – 7:00). The facility will operate 7 days per week.

3 SOUND SOURCE SUMMARY

A Sound Source Summary is included as Table A1 in Appendix A, which lists the sources associated with the facility, in the standard format required by the MOE. Each noise source has been assigned an identification number of the form NS-## (e.g. NS-01).



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Figure 3 shows the location of each source. The non-negligible sources of sound at the facility are described below.

3.1 Inverters

The site plan for the proposed development includes ten inverter collection houses which will be distributed throughout the site (NS-01 through NS-10). Each inverter collection house will include two 500 kW inverters, except for inverter house NS-01, which will contain one inverter unit only. Sound emissions from the inverter collection houses were based on sound measurements of a single inverter unit provided by the proponent, included in Appendix C. The total sound emissions of each inverter package included in this assessment were factored based on a number of inverters included in each installation.

3.2 Transformers

Each inverter station will be accompanied by a small, 1 MVA transformer (NS-11 through NS-20), which step up the voltage of the generated power. The plant will also have one larger, 10 MVA, transformer (NS-21). Sound levels from all transformers were predicted based on NEMA sound ratings for transformers and unit dimensions. A typical shape of the frequency spectrum was utilized according to [Ref. 4]. These calculations, as well as respective sound data and transformer dimensions are included in Appendix C.

The sound power levels for the sources outlined above were used to develop the sound source inventory included as Table A1 in Appendix A, and was input to a predictive computer model (see Appendix D) to quantify the sound emissions of the facility during a predictable worst case hour of operation. For the purposes of this assessment, all sources were assumed to operate 24 hours per day, seven days per week.

4 POINT OF RECEPTION SUMMARY

The forty four key receptors chosen to represent the residential dwellings surrounding the site are shown as locations R01 through R44 in Figure 2.

Each dwelling was assumed to be a two-storey structure, with the respective points of reception

representing an upper storey window. In general, upper storey windows are the most potentially impacted point on the properties since they are most exposed to elevated sources at the subject site and benefit least from ground absorption. Where vacant lots were identified, the future location of the assumed dwelling was taken to be a location that would reasonably be expected to contain the dwelling based on the typical building pattern. The selected points of reception are described briefly in Table A3, the Acoustic Assessment Summary Table.

5 ASSESSMENT CRITERIA

The area surrounding the subject facility is a “Rural” (Class 3) acoustical environment. Accordingly, the relevant document for defining the applicable sound level limits is MOE guidelines NPC-232 [Ref. 5]. The details by which the applicable sound level limits were established for the assessment of this facility are provided in Appendix E. For the purposes of this assessment, the applicable sound level criterion at all locations is 40 dBA. This limit is included in Table A3 of Appendix A.

Some types of sound have a special quality which may tend to increase their audibility and potential for disturbance or annoyance. For tonal sound, MOE guidelines [Ref. 6] stipulate that a penalty of 5 dBA is to be added to the measured source level. A tonal sound is defined as one which has a “pronounced audible tonal quality such as a whine, screech, buzz or hum”. A/C transformers and inverters typically exhibit a humming character at twice the line frequency (120 Hz) and harmonics thereof, as a result of magnetostrictive forces in the windings and semiconductors. In the subsequent analysis, a tonal penalty has been applied to the sound of all sources.

6 IMPACT ASSESSMENT

The MOE has indicated that for proposed solar projects the proponent should consider the cumulative effects from adjacent approved or existing solar facilities. Cornwall Solar Inc. is proposing to construct the Cornwall Solar Project facility on lands approximately 300 metres southwest from the South Glengarry facility. Therefore, detailed analysis data has been obtained from the proponent of the adjacent Cornwall site [Ref. 7], which has been incorporated into the predictive model.



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The predictive analysis, including combined sound emissions from both proposed sites, indicates that the sound levels will be in the range of 26 to 38 dBA at all identified points of reception. These levels are within the applicable sound level criteria.

The results of the analysis are summarized in Table A3 and are shown graphically in Figure 4. Table A3 includes a comparison of the receptors identified for both projects, the sound level contribution from each project and the predicted cumulative sound levels. Where multiple receptor locations were identified on the same land parcel by the Cornwall project acoustic consultant, they are referenced to the one receptor location identified for the South Glengarry project.

Details of the prediction methods are summarized in Appendix D, and sample calculation results are included as Appendices F and G.

7 CONCLUSIONS

The acoustical analysis indicates that the predicted sound levels of both the South Glengarry and adjacent Cornwall solar facilities will be within the applicable sound level limits specified in MOE guideline NPC-232, during all hours of the day and night, under typical “predictable worst case” operating conditions at all identified off-site receptor locations.



REFERENCES

1. Ontario Ministry of Environment Publication NPC-233, *Information to be Submitted for Approval of Stationary Sources of Sound*, October, 1995.
2. Ontario Ministry of Environment Guide, *Supporting Information for the Preparation of an Acoustic Assessment Report*, November, 2003.
3. Environmental Protection Act, *ONTARIO REGULATION 359/09*, Part 1, Section 1, Subsection (6), October 1, 2009.
4. Crocker, Malcolm, J., *Sound Power Level Predictions for Industrial Machinery*, In *Encyclopedia of Acoustics* (Vol. 2, pp. 1049 - 1057), John Wiley & Sons, Inc., 1997.
5. Ontario Ministry of the Environment Publication NPC-232, *Sound Level Limits for Stationary Sources in Class 3 Areas (Rural)*, October, 1995.
6. Ontario Ministry of the Environment Publication NPC-104, *Sound Level Adjustments*, August, 1978.
7. HATCH, *Cornwall Solar Project, Noise Assessment Study Report*, November 23, 2012.
8. International Organization for Standardization, *Acoustics – Attenuation of Sound during Propagation Outdoors – Part 2: General Method of Calculation*, ISO-9613-2, Switzerland, 1996.
9. Google Maps Aerial Imagery, Internet application: maps.google.com



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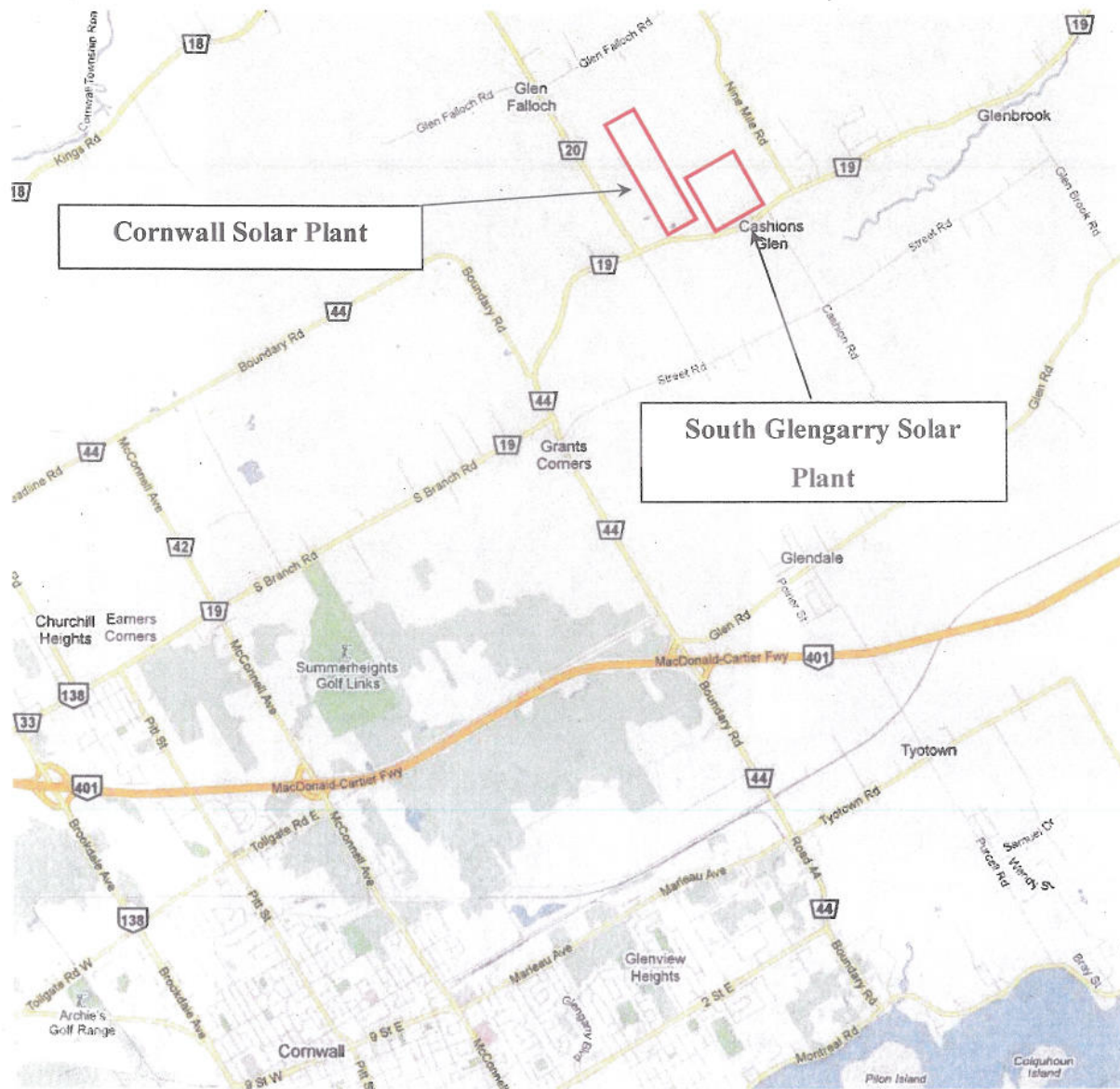


Figure 1: Location Map

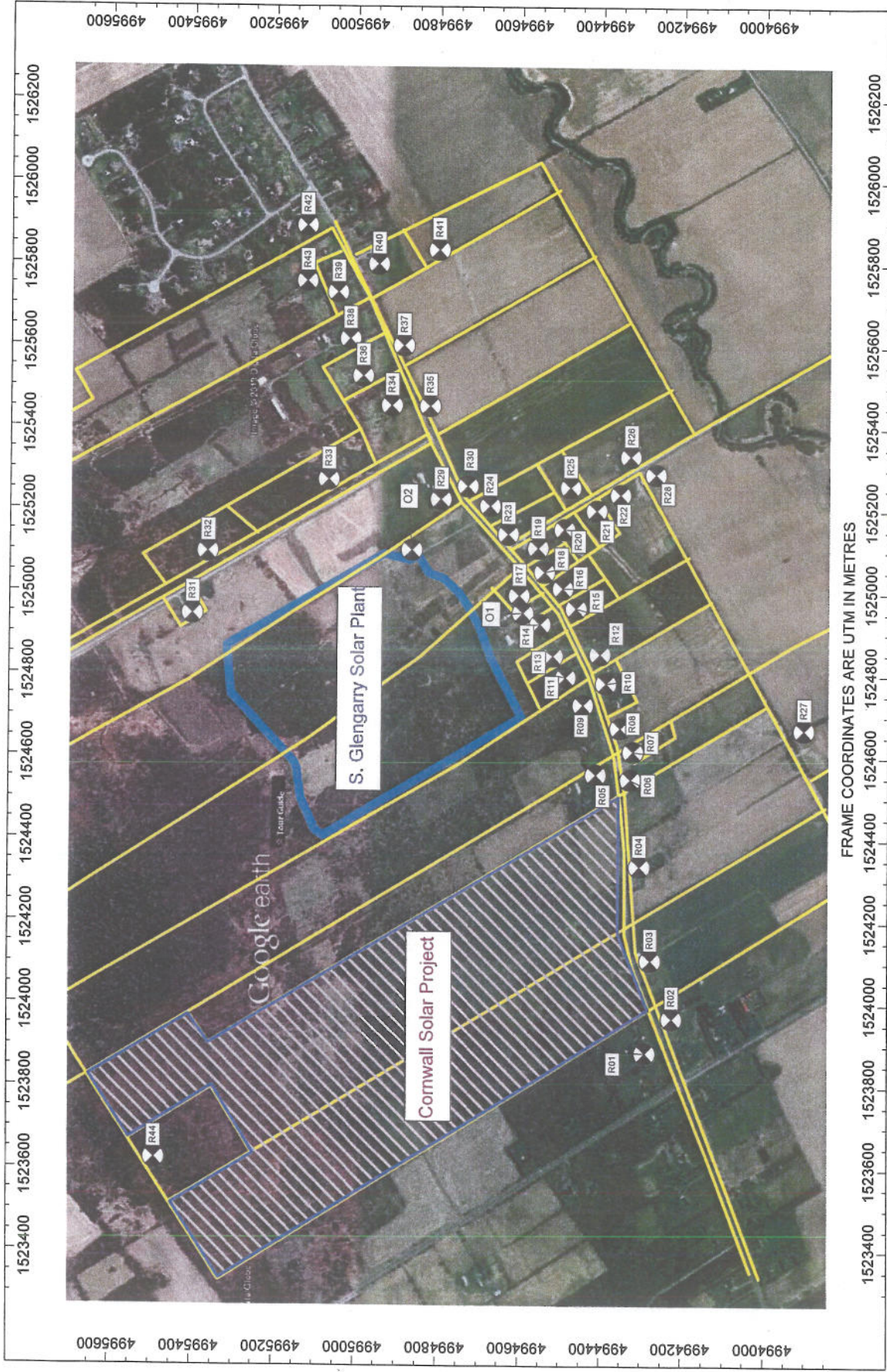


Figure 2: Proposed Solar Projects and Points of Reception
South Glengarry Solar Plant



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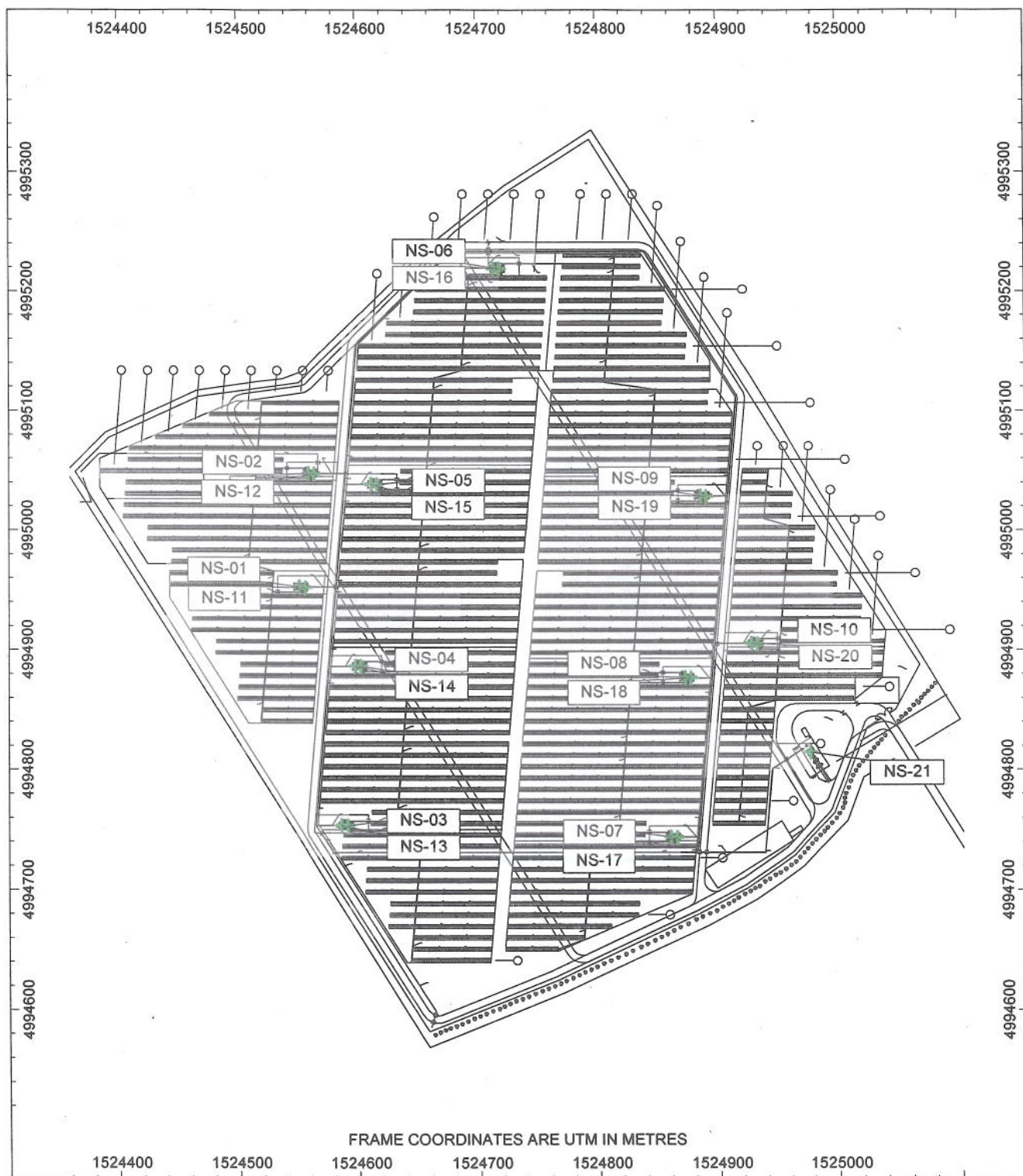


Figure 3: Locations of Sound Sources
South Glengarry Solar Plant

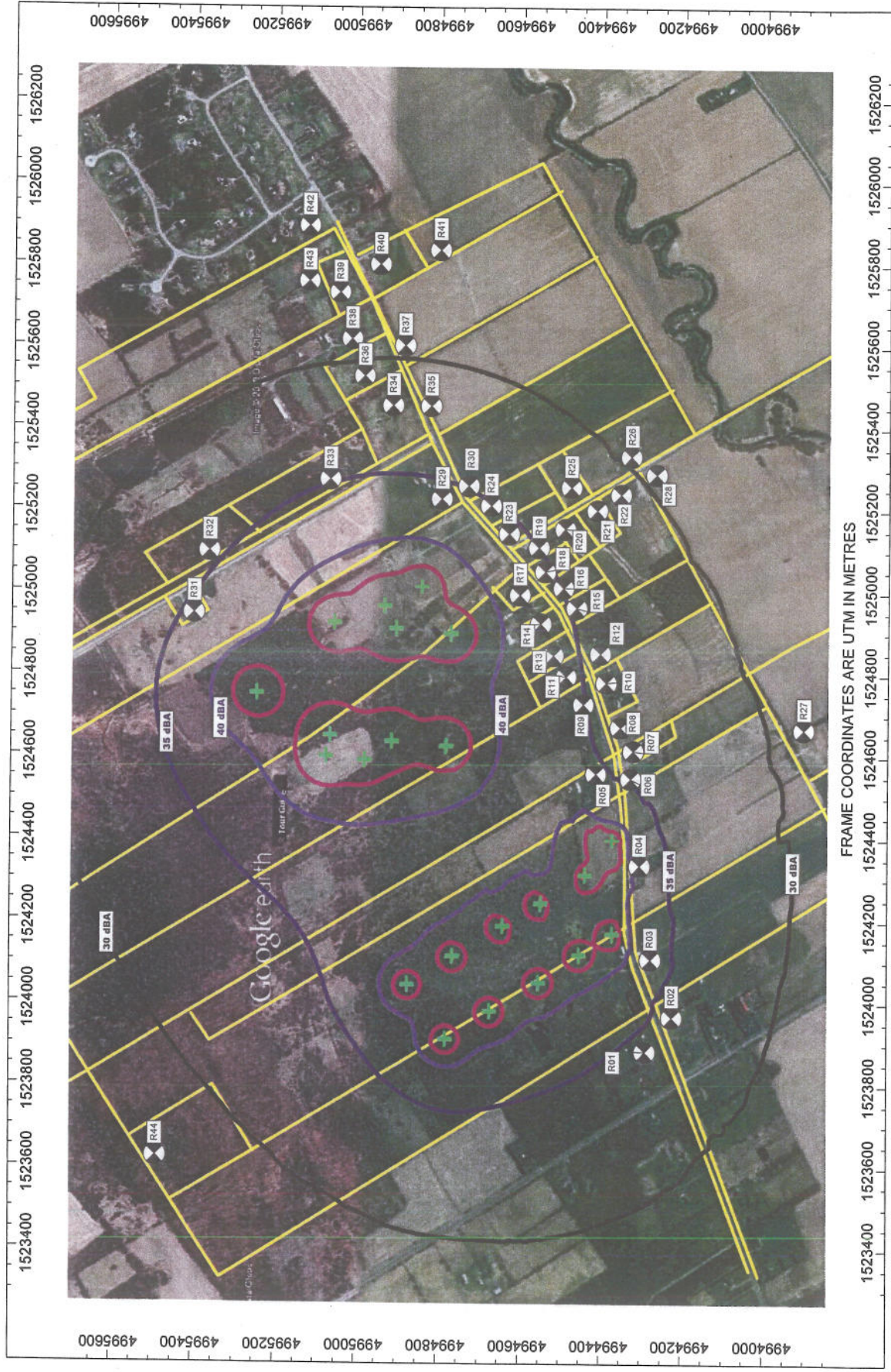


Figure 4: Sound Level Contours Leq (dBA)

Predicted at 4.5 m Above Grade
South Glengarry Solar Plant

APPENDIX A

Acoustic Assessment Summary Tables



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ACOUSTIC ASSESSMENT SUMMARY TABLES VERSION CONTROL

Penn Energy – S. Glengarry_St. Lawrence-1 Solar Farm, 18423 & 18461 County Road 19,
South Glengarry, United Counties of Stormont, Dundas and Glengarry, Ontario

Ver.	Date	Issued as Part of AAR?	Version Description	Prepared By
1.0	18-Apr-2011	Y	Draft version of tables as part of Ver. 1 of Acoustic Assessment Report	P. Chocensky
2.0	7-Jul-2011	Y	Original version of tables as part of Ver. 2 of Acoustic Assessment Report	P. Chocensky
3.0	7-Dec-2011	Y	Updated version of tables as part of Ver. 3 of Acoustic Assessment Report	P. Chocensky
4.0	10-May-13	Y	Updated version of tables as part of Ver. 4 of Acoustic Assessment Report	P. Chocensky



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Table A1: Noise Source Summary Table

Source ID	Source Description	UTM Coordinates [m]		Sound Power Level [dBA re 10^-12 W]	Source Location	Sound Characteristic	Noise Control Measure
		Easting	Northing				
South Glengarry Solar Plant							
NS-01	Inverter House MV1	524587	4994981	88	O	S,T	U
NS-02	Inverter House MV2	524595	4995076	91	O	S,T	U
NS-03	Inverter House MV3	524627	4994781	91	O	S,T	U
NS-04	Inverter House MV4	524638	4994914	91	O	S,T	U
NS-05	Inverter House MV5	524652	4995066	91	O	S,T	U
NS-06	Inverter House MV6	524754	4995247	91	O	S,T	U
NS-07	Inverter House MV7	524896	4994772	91	O	S,T	U
NS-08	Inverter House MV8	524908	4994905	91	O	S,T	U
NS-09	Inverter House MV9	524921	4995057	91	O	S,T	U
NS-10	Inverter House MV10	524968	4994933	91	O	S,T	U
NS-11	Transformer 1 MVA (MV1)	524592	4994980	69	O	S,T	U
NS-12	Transformer 1 MVA (MV2)	524600	4995075	69	O	S,T	U
NS-13	Transformer 1 MVA (MV3)	524622	4994782	69	O	S,T	U
NS-14	Transformer 1 MVA (MV4)	524634	4994914	69	O	S,T	U
NS-15	Transformer 1 MVA (MV5)	524647	4995067	69	O	S,T	U
NS-16	Transformer 1 MVA (MV6)	524750	4995247	69	O	S,T	U
NS-17	Transformer 1 MVA (MV7)	524901	4994772	69	O	S,T	U
NS-18	Transformer 1 MVA (MV8)	524913	4994905	69	O	S,T	U
NS-19	Transformer 1 MVA (MV9)	524926	4995056	69	O	S,T	U
NS-20	Transformer 1 MVA (MV10)	524963	4994933	69	O	S,T	U
NS-21	Transformer 10 MVA	525013	4994843	88	O	S,T	U
Cornwall Solar Project (Adjacent proposed project)							
CW_Inv01	Cornwall - Inverter Cluster 01	524309	4994439	83	O	S,T	B
CW_Inv02	Cornwall - Inverter Cluster 02	524240	4994548	83	O	S,T	B
CW_Inv03	Cornwall - Inverter Cluster 03	524184	4994641	83	O	S,T	B
CW_Inv04	Cornwall - Inverter Cluster 04	524111	4994763	83	O	S,T	U
CW_Inv05	Cornwall - Inverter Cluster 05	524042	4994873	83	O	S,T	U
CW_Inv06	Cornwall - Inverter Cluster 06	523909	4994780	83	O	S,T	U
CW_Inv07	Cornwall - Inverter Cluster 07	523977	4994672	83	O	S,T	U
CW_Inv08	Cornwall - Inverter Cluster 08	524047	4994553	83	O	S,T	U
CW_Inv09	Cornwall - Inverter Cluster 09	524115	4994452	83	O	S,T	U
CW_Inv10	Cornwall - Inverter Cluster 10	524166	4994371	83	O	S,T	B
CW_Sub	Cornwall - Transformer Substation	524396	4994372	89	O	S,T	B
CW_Trans01	Cornwall - Inverter Transformer 01	524314	4994439	75	O	S,T	B
CW_Trans02	Cornwall - Inverter Transformer 02	524245	4994548	75	O	S,T	B
CW_Trans03	Cornwall - Inverter Transformer 03	524189	4994641	75	O	S,T	B
CW_Trans04	Cornwall - Inverter Transformer 04	524116	4994763	75	O	S,T	U
CW_Trans05	Cornwall - Inverter Transformer 05	524047	4994873	75	O	S,T	U
CW_Trans06	Cornwall - Inverter Transformer 06	523914	4994780	75	O	S,T	U
CW_Trans07	Cornwall - Inverter Transformer 07	523982	4994672	75	O	S,T	U
CW_Trans08	Cornwall - Inverter Transformer 08	524052	4994553	75	O	S,T	U
CW_Trans09	Cornwall - Inverter Transformer 09	524120	4994452	75	O	S,T	U
CW_Trans10	Cornwall - Inverter Transformer 10	524171	4994371	75	O	S,T	B

Legend**Sound Characteristics**

S: Steady
 Q: Quasi-steady impulsive
 I: Impulsive
 B: Buzzing
 T: Tonal (includes 5 dBA penalty)
 C: Cyclically varying
 O: Occasional

Noise Control Measures

S: Silencer, Acoustic Louvre, Muffler
 A: Acoustic Lining, Plenum
 B: Barrier, Berm, Screening
 L: Lagging (Acoustical Wrapping)
 E: Acoustic Enclosure
 O: Other
 U: Currently Uncontrolled

Source Location

O: Outdoors
 I: Indoors



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Table A2: Point of Reception Noise Impact Table (South Glengarry Solar Plant Only)

Source ID	Source Name	Point of Reception									
		R01		R02		R03		R04		R05	
		Dist [m]	LEQ [dBA]	Dist [m]	LEQ [dBA]	Dist [m]	LEQ [dBA]	Dist [m]	LEQ [dBA]	Dist [m]	LEQ [dBA]
NS-01	Inverter House MV1	987	13	979	13	852	15	722	17	568	19
NS-02	Inverter House MV2	1062	15	1059	15	937	17	814	18	664	21
NS-03	Inverter House MV3	893	17	864	18	725	20	559	22	374	27
NS-04	Inverter House MV4	981	16	963	17	830	18	681	20	507	24
NS-05	Inverter House MV5	1094	15	1086	15	960	17	825	18	660	21
NS-06	Inverter House MV6	1295	13	1291	13	1167	14	1032	16	856	18
NS-07	Inverter House MV7	1123	15	1079	15	932	17	731	20	493	24
NS-08	Inverter House MV8	1196	14	1162	14	1018	13	830	18	603	22
NS-09	Inverter House MV9	1292	13	1267	13	1128	15	954	17	739	20
NS-10	Inverter House MV10	1262	13	1227	14	1083	15	893	17	662	21
NS-11	Transformer 1 MVA (MV1)	991	--	981	--	855	--	723	--	568	0
NS-12	Transformer 1 MVA (MV2)	1064	--	1061	--	939	--	815	--	663	--
NS-13	Transformer 1 MVA (MV3)	889	--	861	--	722	--	557	0	374	4
NS-14	Transformer 1 MVA (MV4)	978	--	960	--	827	--	679	--	507	1
NS-15	Transformer 1 MVA (MV5)	1091	--	1083	--	957	--	824	--	660	--
NS-16	Transformer 1 MVA (MV6)	1292	--	1288	--	1164	--	1030	--	855	--
NS-17	Transformer 1 MVA (MV7)	1128	--	1084	--	936	--	735	--	496	1
NS-18	Transformer 1 MVA (MV8)	1201	--	1166	--	1022	--	834	--	606	--
NS-19	Transformer 1 MVA (MV9)	1295	--	1270	--	1131	--	957	--	741	--
NS-20	Transformer 1 MVA (MV10)	1258	--	1223	--	1079	--	889	--	659	--
NS-21	Transformer 10 MVA	1259	12	1216	12	1068	13	866	16	625	19

Source ID	Source Name	Point of Reception									
		R06		R07		R08		R09		R10	
		Dist [m]	LEQ [dBA]	Dist [m]	LEQ [dBA]	Dist [m]	LEQ [dBA]	Dist [m]	LEQ [dBA]	Dist [m]	LEQ [dBA]
NS-01	Inverter House MV1	656	18	660	18	633	18	554	20	623	18
NS-02	Inverter House MV2	751	19	755	19	727	20	644	21	711	20
NS-03	Inverter House MV3	462	24	460	25	430	25	351	27	421	25
NS-04	Inverter House MV4	595	22	594	22	562	22	478	24	544	23
NS-05	Inverter House MV5	747	19	746	19	713	20	626	21	689	20
NS-06	Inverter House MV6	944	17	936	17	897	17	802	19	858	18
NS-07	Inverter House MV7	566	22	532	23	475	24	367	27	400	26
NS-08	Inverter House MV8	682	20	654	21	600	22	494	24	532	23
NS-09	Inverter House MV9	821	18	797	19	747	19	641	21	683	20
NS-10	Inverter House MV10	739	20	707	20	651	21	544	23	576	22
NS-11	Transformer 1 MVA (MV1)	656	--	659	--	632	--	552	0	621	--
NS-12	Transformer 1 MVA (MV2)	751	--	754	--	726	--	643	--	710	--
NS-13	Transformer 1 MVA (MV3)	462	2	461	2	431	3	353	5	423	3
NS-14	Transformer 1 MVA (MV4)	594	--	593	--	562	0	478	2	545	0
NS-15	Transformer 1 MVA (MV5)	747	--	746	--	714	--	627	--	691	--
NS-16	Transformer 1 MVA (MV6)	943	--	935	--	897	--	802	--	859	--
NS-17	Transformer 1 MVA (MV7)	570	0	535	1	478	2	370	4	402	4
NS-18	Transformer 1 MVA (MV8)	685	--	656	--	602	--	495	1	533	1
NS-19	Transformer 1 MVA (MV9)	823	--	799	--	748	--	642	--	683	--
NS-20	Transformer 1 MVA (MV10)	736	--	705	--	649	--	542	1	575	--
NS-21	Transformer 10 MVA	696	18	657	19	597	20	489	22	510	21



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Source ID	Source Name	Point of Reception									
		R11		R12		R13		R14		R15	
		Dist [m]	LEQ [dBA]	Dist [m]	LEQ [dBA]	Dist [m]	LEQ [dBA]	Dist [m]	LEQ [dBA]	Dist [m]	LEQ [dBA]
NS-01	Inverter House MV1	535	20	635	18	529	20	545	20	640	18
NS-02	Inverter House MV2	621	21	719	20	610	22	618	21	714	20
NS-03	Inverter House MV3	338	28	439	25	342	27	375	27	462	24
NS-04	Inverter House MV4	455	25	553	23	447	25	461	24	556	23
NS-05	Inverter House MV5	596	22	692	20	580	22	582	22	678	20
NS-06	Inverter House MV6	760	19	849	18	733	20	715	20	811	18
NS-07	Inverter House MV7	301	29	371	27	257	30	222	31	316	28
NS-08	Inverter House MV8	432	25	504	24	390	26	353	27	445	25
NS-09	Inverter House MV9	583	22	657	21	542	23	505	24	595	22
NS-10	Inverter House MV10	478	24	542	23	431	25	384	26	471	24
NS-11	Transformer 1 MVA (MV1)	533	1	632	--	527	1	542	1	636	--
NS-12	Transformer 1 MVA (MV2)	619	--	717	--	608	--	615	--	711	--
NS-13	Transformer 1 MVA (MV3)	341	5	442	3	345	5	379	4	466	2
NS-14	Transformer 1 MVA (MV4)	456	2	555	0	449	2	464	2	558	0
NS-15	Transformer 1 MVA (MV5)	598	--	694	--	582	--	584	--	681	--
NS-16	Transformer 1 MVA (MV6)	760	--	849	--	734	--	716	--	812	--
NS-17	Transformer 1 MVA (MV7)	303	6	371	4	258	8	221	9	315	6
NS-18	Transformer 1 MVA (MV8)	433	3	505	1	391	4	353	5	445	3
NS-19	Transformer 1 MVA (MV9)	583	--	657	--	542	1	505	1	595	--
NS-20	Transformer 1 MVA (MV10)	476	2	541	1	429	3	384	4	471	2
NS-21	Transformer 10 MVA	416	23	468	22	363	24	304	26	383	24

Source ID	Source Name	Point of Reception									
		R16		R17		R18		R19		R20	
		Dist [m]	LEQ [dBA]	Dist [m]	LEQ [dBA]	Dist [m]	LEQ [dBA]	Dist [m]	LEQ [dBA]	Dist [m]	LEQ [dBA]
NS-01	Inverter House MV1	644	18	555	20	638	18	672	18	749	16
NS-02	Inverter House MV2	713	20	617	21	701	20	729	20	808	19
NS-03	Inverter House MV3	478	24	407	26	486	24	531	23	602	22
NS-04	Inverter House MV4	560	22	472	24	556	23	590	22	667	21
NS-05	Inverter House MV5	674	21	575	22	659	21	683	20	763	19
NS-06	Inverter House MV6	793	19	686	20	765	19	774	19	854	18
NS-07	Inverter House MV7	298	29	194	33	277	29	301	29	380	26
NS-08	Inverter House MV8	421	25	313	28	390	26	400	26	480	24
NS-09	Inverter House MV9	568	22	459	25	531	23	533	23	610	22
NS-10	Inverter House MV10	440	25	330	28	400	26	401	26	479	24
NS-11	Transformer 1 MVA (MV1)	640	--	550	0	634	--	667	--	745	--
NS-12	Transformer 1 MVA (MV2)	710	--	614	--	698	--	725	--	805	--
NS-13	Transformer 1 MVA (MV3)	482	2	412	3	491	2	536	1	606	--
NS-14	Transformer 1 MVA (MV4)	563	0	475	2	559	0	594	--	670	--
NS-15	Transformer 1 MVA (MV5)	676	--	578	--	662	--	687	--	766	--
NS-16	Transformer 1 MVA (MV6)	795	--	688	--	766	--	777	--	856	--
NS-17	Transformer 1 MVA (MV7)	297	6	192	10	274	7	298	6	377	4
NS-18	Transformer 1 MVA (MV8)	420	3	312	6	388	4	398	4	478	2
NS-19	Transformer 1 MVA (MV9)	567	0	457	2	529	1	530	1	608	--
NS-20	Transformer 1 MVA (MV10)	440	3	331	5	401	4	402	4	480	2
NS-21	Transformer 10 MVA	347	25	240	28	303	26	300	26	378	24



Source ID	Source Name	Point of Reception									
		R21		R22		R23		R24		R25	
		Dist [m]	LEQ [dBA]	Dist [m]	LEQ [dBA]	Dist [m]	LEQ [dBA]	Dist [m]	LEQ [dBA]	Dist [m]	LEQ [dBA]
NS-01	Inverter House MV1	836	15	904	14	657	18	695	17	837	15
NS-02	Inverter House MV2	897	17	966	17	705	20	734	20	891	17
NS-03	Inverter House MV3	681	20	746	19	537	23	594	22	699	20
NS-04	Inverter House MV4	753	19	821	18	578	22	621	21	757	19
NS-05	Inverter House MV5	853	18	922	17	656	21	682	20	843	18
NS-06	Inverter House MV6	945	17	1014	16	728	20	731	20	918	17
NS-07	Inverter House MV7	470	24	539	23	284	29	329	28	465	24
NS-08	Inverter House MV8	572	22	641	21	360	27	380	26	551	23
NS-09	Inverter House MV9	701	20	770	19	480	24	479	24	669	21
NS-10	Inverter House MV10	569	22	638	21	349	27	354	27	539	23
NS-11	Transformer 1 MVA (MV1)	831	--	900	--	652	--	690	--	833	--
NS-12	Transformer 1 MVA (MV2)	894	--	963	--	701	--	730	--	888	--
NS-13	Transformer 1 MVA (MV3)	685	--	750	--	542	1	598	--	703	--
NS-14	Transformer 1 MVA (MV4)	756	--	824	--	582	--	625	--	760	--
NS-15	Transformer 1 MVA (MV5)	856	--	925	--	660	--	686	--	847	--
NS-16	Transformer 1 MVA (MV6)	947	--	1017	--	730	--	734	--	921	--
NS-17	Transformer 1 MVA (MV7)	467	2	536	1	279	7	324	6	461	2
NS-18	Transformer 1 MVA (MV8)	569	0	639	--	357	5	376	4	548	0
NS-19	Transformer 1 MVA (MV9)	699	--	767	--	477	2	475	2	666	--
NS-20	Transformer 1 MVA (MV10)	571	0	640	--	352	5	357	5	541	1
NS-21	Transformer 10 MVA	469	22	537	21	248	28	259	28	439	23

Source ID	Source Name	Point of Reception									
		R26		R27		R28		R29		R30	
		Dist [m]	LEQ [dBA]	Dist [m]	LEQ [dBA]	Dist [m]	LEQ [dBA]	Dist [m]	LEQ [dBA]	Dist [m]	LEQ [dBA]
NS-01	Inverter House MV1	989	13	1080	12	1000	13	666	18	716	17
NS-02	Inverter House MV2	1048	16	1174	14	1064	15	691	20	747	19
NS-03	Inverter House MV3	837	18	878	18	837	18	600	22	633	21
NS-04	Inverter House MV4	907	17	1011	16	917	17	600	22	647	21
NS-05	Inverter House MV5	1002	16	1163	14	1021	16	635	21	693	20
NS-06	Inverter House MV6	1084	15	1346	13	1115	15	653	21	721	20
NS-07	Inverter House MV7	621	21	897	17	638	21	331	28	364	27
NS-08	Inverter House MV8	714	20	1029	16	741	19	337	28	391	26
NS-09	Inverter House MV9	835	18	1180	14	870	18	402	26	469	24
NS-10	Inverter House MV10	705	20	1072	15	738	20	293	29	354	27
NS-11	Transformer 1 MVA (MV1)	985	--	1079	--	996	--	661	--	712	--
NS-12	Transformer 1 MVA (MV2)	1045	--	1173	--	1061	--	686	--	743	--
NS-13	Transformer 1 MVA (MV3)	841	--	879	--	841	--	605	--	638	--
NS-14	Transformer 1 MVA (MV4)	911	--	1011	--	920	--	604	--	651	--
NS-15	Transformer 1 MVA (MV5)	1006	--	1163	--	1024	--	640	--	697	--
NS-16	Transformer 1 MVA (MV6)	1086	--	1345	--	1117	--	656	--	724	--
NS-17	Transformer 1 MVA (MV7)	617	--	899	--	635	--	326	6	359	5
NS-18	Transformer 1 MVA (MV8)	711	--	1030	--	739	--	332	5	387	4
NS-19	Transformer 1 MVA (MV9)	832	--	1181	--	867	--	398	4	465	2
NS-20	Transformer 1 MVA (MV10)	707	--	1071	--	740	--	297	6	358	5
NS-21	Transformer 10 MVA	604	19	1000	14	637	19	219	29	270	27



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Source ID	Source Name	Point of Reception									
		R31		R32		R33		R34		R35	
		Dist [m]	LEQ [dBA]	Dist [m]	LEQ [dBA]	Dist [m]	LEQ [dBA]	Dist [m]	LEQ [dBA]	Dist [m]	LEQ [dBA]
NS-01	Inverter House MV1	554	20	639	18	693	17	870	15	881	15
NS-02	Inverter House MV2	479	24	579	22	678	20	874	18	895	17
NS-03	Inverter House MV3	698	20	749	19	708	20	839	18	828	18
NS-04	Inverter House MV4	577	22	643	21	654	21	817	18	821	18
NS-05	Inverter House MV5	447	25	536	23	622	21	817	18	838	18
NS-06	Inverter House MV6	247	31	362	27	549	23	774	19	817	18
NS-07	Inverter House MV7	632	21	626	21	481	24	577	22	560	22
NS-08	Inverter House MV8	499	24	497	24	401	26	547	23	552	23
NS-09	Inverter House MV9	346	27	355	27	352	27	551	23	581	22
NS-10	Inverter House MV10	469	24	450	25	335	28	487	24	498	24
NS-11	Transformer 1 MVA (MV1)	551	0	635	--	687	--	865	--	876	--
NS-12	Transformer 1 MVA (MV2)	476	2	575	--	674	--	869	--	890	--
NS-13	Transformer 1 MVA (MV3)	700	--	752	--	712	--	843	--	833	--
NS-14	Transformer 1 MVA (MV4)	579	--	646	--	658	--	821	--	825	--
NS-15	Transformer 1 MVA (MV5)	449	2	540	1	626	--	821	--	842	--
NS-16	Transformer 1 MVA (MV6)	251	8	367	4	553	0	779	--	821	--
NS-17	Transformer 1 MVA (MV7)	632	--	624	--	477	2	572	0	555	0
NS-18	Transformer 1 MVA (MV8)	498	1	495	1	397	4	542	1	547	0
NS-19	Transformer 1 MVA (MV9)	346	5	353	5	348	5	547	0	577	--
NS-20	Transformer 1 MVA (MV10)	469	2	452	2	339	5	492	2	503	1
NS-21	Transformer 10 MVA	563	20	529	21	346	25	448	22	441	23

Source ID	Source Name	Point of Reception									
		R36		R37		R38		R39		R40	
		Dist [m]	LEQ [dBA]	Dist [m]	LEQ [dBA]	Dist [m]	LEQ [dBA]	Dist [m]	LEQ [dBA]	Dist [m]	LEQ [dBA]
NS-01	Inverter House MV1	940	14	1018	13	1030	13	1145	12	1213	11
NS-02	Inverter House MV2	936	17	1023	16	1023	16	1135	15	1210	14
NS-03	Inverter House MV3	923	17	980	16	1018	16	1135	15	1184	14
NS-04	Inverter House MV4	892	17	963	17	984	16	1100	15	1162	14
NS-05	Inverter House MV5	879	18	966	17	966	17	1078	15	1153	14
NS-06	Inverter House MV6	815	18	920	17	892	17	996	16	1086	15
NS-07	Inverter House MV7	666	21	714	20	761	19	879	18	920	17
NS-08	Inverter House MV8	624	21	693	20	717	20	834	18	892	17
NS-09	Inverter House MV9	609	22	700	20	696	20	809	19	884	18
NS-10	Inverter House MV10	561	22	635	21	654	21	771	19	831	18
NS-11	Transformer 1 MVA (MV1)	935	--	1013	--	1025	--	1140	--	1208	--
NS-12	Transformer 1 MVA (MV2)	931	--	1018	--	1018	--	1130	--	1206	--
NS-13	Transformer 1 MVA (MV3)	927	--	985	--	1022	--	1140	--	1189	--
NS-14	Transformer 1 MVA (MV4)	896	--	968	--	988	--	1104	--	1166	--
NS-15	Transformer 1 MVA (MV5)	883	--	970	--	971	--	1083	--	1158	--
NS-16	Transformer 1 MVA (MV6)	820	--	924	--	896	--	1000	--	1091	--
NS-17	Transformer 1 MVA (MV7)	661	--	709	--	756	--	874	--	915	--
NS-18	Transformer 1 MVA (MV8)	619	--	688	--	713	--	830	--	887	--
NS-19	Transformer 1 MVA (MV9)	605	--	695	--	691	--	804	--	879	--
NS-20	Transformer 1 MVA (MV10)	566	0	639	--	659	--	776	--	836	--
NS-21	Transformer 10 MVA	534	21	590	20	629	19	746	17	793	17



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Source ID	Source Name	Point of Reception							
		R41		R42		R43		R44	
		Dist [m]	LEQ [dBA]	Dist [m]	LEQ [dBA]	Dist [m]	LEQ [dBA]	Dist [m]	LEQ [dBA]
NS-01	Inverter House MV1	1260	10	1314	10	1180	11	1088	12
NS-02	Inverter House MV2	1269	13	1299	13	1164	14	1055	15
NS-03	Inverter House MV3	1208	14	1312	13	1182	14	1227	14
NS-04	Inverter House MV4	1201	14	1273	13	1140	15	1165	14
NS-05	Inverter House MV5	1211	14	1243	14	1108	15	1111	15
NS-06	Inverter House MV6	1168	14	1145	15	1011	16	1156	14
NS-07	Inverter House MV7	939	17	1058	15	931	17	1460	12
NS-08	Inverter House MV8	932	17	1010	16	878	18	1410	12
NS-09	Inverter House MV9	947	17	974	16	839	18	1367	12
NS-10	Inverter House MV10	876	18	945	17	813	18	1454	12
NS-11	Transformer 1 MVA (MV1)	1255	--	1309	--	1175	--	1093	--
NS-12	Transformer 1 MVA (MV2)	1264	--	1294	--	1159	--	1060	--
NS-13	Transformer 1 MVA (MV3)	1212	--	1317	--	1186	--	1223	--
NS-14	Transformer 1 MVA (MV4)	1206	--	1277	--	1144	--	1162	--
NS-15	Transformer 1 MVA (MV5)	1216	--	1248	--	1112	--	1107	--
NS-16	Transformer 1 MVA (MV6)	1172	--	1150	--	1016	--	1151	--
NS-17	Transformer 1 MVA (MV7)	933	--	1053	--	926	--	1465	--
NS-18	Transformer 1 MVA (MV8)	927	--	1005	--	873	--	1415	--
NS-19	Transformer 1 MVA (MV9)	943	--	970	--	835	--	1372	--
NS-20	Transformer 1 MVA (MV10)	881	--	950	--	818	--	1450	--
NS-21	Transformer 10 MVA	822	16	925	15	797	17	1532	9

Note: Reported sound levels include all adjustment factors (time weighting, tonal penalty), as applicable.



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Table A3: Acoustic Assessment Summary Table

Point of Reception		Point of Reception Description	UTM Coordinates [m]		Sound Level at Point of Reception, LEQ [dBA]			Verified by Acoustic Audit	Performance Limit, LEQ [dBA]	Compliance with Performance Limit
S. Glengarry	Cornwall		Easting	Northing	S. Glengarry	Cornwall	Total			
R01	R029, R033	Residential Dwelling	523882	4994289	25	34	34	No	40	Yes
R02	R032	Residential Dwelling	523967	4994223	25	33	34	No	40	Yes
R03	R034	Residential Dwelling	524107	4994276	27	36	37	No	40	Yes
R04	R037	Residential Dwelling	524335	4994304	29	37	38	No	40	Yes
R05	R001, R039	Residential Dwelling	524558	4994413	32	33	35	No	40	Yes
R06	R038	Residential Dwelling	524546	4994326	31	32	35	No	40	Yes
R07	R078	Residential Dwelling	524614	4994321	31	31	34	No	40	Yes
R08		Vacant Lot	524671	4994353	32	30	34	No	40	Yes
R09	R002, R073	Residential Dwelling	524728	4994445	34	29	35	No	40	Yes
R10	R040, R076	Residential Dwelling	524780	4994389	33	29	34	No	40	Yes
R11	R003	Residential Dwelling	524795	4994488	35	28	36	No	40	Yes
R12	R041	Residential Dwelling	524851	4994403	33	28	34	No	40	Yes
R13	R004	Residential Dwelling	524847	4994519	36	28	36	No	40	Yes
R14	R005, R006	Residential Dwelling	524923	4994551	36	27	37	No	40	Yes
R15	R043	Residential Dwelling	524962	4994463	34	27	35	No	40	Yes
R16	R045	Residential Dwelling	525010	4994496	34	26	35	No	40	Yes
R17	R007	Residential Dwelling	524993	4994603	37	26	38	No	40	Yes
R18	R008, R079	Residential Dwelling	525050	4994542	35	26	35	No	40	Yes
R19	R009, R046	Residential Dwelling	525109	4994558	35	25	35	No	40	Yes
R20	R047	Residential Dwelling	525155	4994493	33	25	33	No	40	Yes
R21	R048	Residential Dwelling	525200	4994413	31	24	32	No	40	Yes
R22	R049	Vacant Lot	525239	4994355	30	24	31	No	40	Yes
R23	R010	Residential Dwelling	525142	4994631	35	25	36	No	40	Yes
R24	R011	Residential Dwelling	525211	4994676	35	24	35	No	40	Yes
R25	R050, R086	Residential Dwelling	525256	4994478	31	24	32	No	40	Yes
R26	R053	Residential Dwelling	525332	4994329	29	23	30	No	40	Yes
R27		Vacant Lot	524668	4993904	26	26	29	No	40	Yes
R28	R051	Vacant Lot	525288	4994268	28	23	30	No	40	Yes
R29	R012	Residential Dwelling	525226	4994795	36	24	36	No	40	Yes
R30	R052	Vacant Lot	525258	4994731	35	24	35	No	40	Yes
R31	R013	Residential Dwelling	524947	4995402	35	25	36	No	40	Yes
R32		Vacant Lot	525097	4995364	34	24	34	No	40	Yes
R33		Vacant Lot	525273	4995069	34	24	35	No	40	Yes
R34		Residential Dwelling	525455	4994916	31	22	32	No	40	Yes
R35		Vacant Lot	525454	4994823	31	22	32	No	40	Yes
R36		Residential Dwelling	525527	4994986	30	21	31	No	40	Yes
R37		Vacant Lot	525601	4994888	29	21	30	No	40	Yes
R38		Residential Dwelling	525616	4995018	29	21	29	No	40	Yes
R39		Residential Dwelling	525730	4995048	27	20	28	No	40	Yes
R40		Residential Dwelling	525799	4994949	26	20	27	No	40	Yes
R41		Vacant Lot	525834	4994803	26	20	27	No	40	Yes
R42		Residential Dwelling	525893	4995125	25	19	26	No	40	Yes
R43		Residential Dwelling	525758	4995124	27	20	27	No	40	Yes
R44	R023	Vacant Lot	523624	4995488	24	26	28	No	40	Yes



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APPENDIX B

Zoning Maps



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**Township of South Glengarry
Zoning By-law No. 38-09**

**Subject Property:
18461 County Road 19
Zoned: RU - Rural**



APPENDIX C

Equipment Sound Data



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Table 1: AEI Solaron 500 Sound Power Measurements – Calculated Sound Power Levels in dB, re: 1×10^{-12} W

Configuration	LWA	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	315 Hz	400 Hz	500 Hz	630 Hz	800 Hz	1 kHz	1.25 kHz	1.6 kHz	2 kHz	2.5 kHz	3.15 kHz	4 kHz	5 kHz	6.3 kHz	8 kHz	10 kHz
1	83.5	77.5	81.0	77.0	80.0	84.0	87.5	79.0	75.5	77.0	76.0	77.5	73.0	74.0	74.0	71.0	70.0	68.0	65.0	64.5	64.5	63.0	58.5	67.5	66.5
2	84.0	77.5	80.5	77.0	80.0	84.0	87.5	78.5	75.5	76.5	76.0	76.0	73.5	74.0	74.0	71.0	70.0	68.0	66.0	66.0	65.5	65.0	62.5	72.0	72.0
3	83.5	77.0	80.5	76.5	80.0	83.5	87.5	78.5	75.5	76.5	77.5	76.0	73.5	74.5	74.0	71.5	72.0	69.5	66.5	65.5	64.5	63.0	58.0	63.0	61.5
4	83.0	77.0	77.0	76.5	80.0	83.5	87.5	78.5	73.5	76.5	76.0	77.5	73.5	74.0	74.0	71.0	70.0	67.5	65.0	64.5	64.5	63.0	58.0	61.5	61.5

*The testing environment did not meet the requirements in the ISO-3744 Standard. The presented data in all 1/3 octave bands should be considered as the upper boundary of the exact sound power levels.

Table 2: AEI Solaron 500 Configuration 1 – Measured Sound Pressure Level at 1m in dB, re: 20μPa

Mic Position	dBA	50 Hz	63 Hz	80 Hz	100 Hz	125 Hz	160 Hz	200 Hz	250 Hz	315 Hz	400 Hz	500 Hz	630 Hz	800 Hz	1 kHz	1.25 kHz	1.6 kHz	2 kHz	2.5 kHz	3.15 kHz	4 kHz	5 kHz	6.3 kHz	8 kHz	10 kHz
Front	67.7	61.0	69.0	61.0	63.9	68.4	75.2	61.7	57.2	59.5	58.5	59.7	55.9	58.1	57.7	56.1	54.5	51.3	49.5	49.5	48.9	48.1	43.6	52.2	51.1
Left	66.1	59.0	61.1	61.9	65.0	67.4	66.0	59.1	61.0	60.4	61.5	61.9	57.3	56.7	56.4	53.2	52.5	50.3	47.9	46.6	45.8	42.8	39.3	49.3	48.5
Rear	67.8	61.0	65.5	60.1	62.4	65.9	68.3	64.4	59.9	59.4	59.3	59.9	57.3	58.9	60.1	56.3	55.4	52.2	50.7	49.5	49.6	48.7	44.0	54.3	54.7
Right	67.7	58.2	65.6	57.1	63.1	68.7	75.0	66.6	58.9	63.5	58.2	60.8	57.0	56.7	57.1	54.1	52.6	50.2	47.5	46.9	46.9	47.0	41.5	51.9	51.3
Front Top	64.3	60.6	59.4	59.2	61.2	66.7	67.9	56.7	56.2	56.9	57.7	59.5	54.3	55.3	54.5	51.9	51.2	49.3	46.7	45.8	45.5	43.0	39.1	48.2	43.7
Left Top	63.9	60.7	60.6	59.6	59.8	63.0	62.6	55.7	54.2	58.3	56.9	59.7	55.2	55.8	55.0	52.3	50.4	49.3	46.2	45.1	45.0	42.5	38.0	46.7	42.9
Rear Top	64.8	59.5	60.1	57.4	62.5	65.8	62.5	55.8	56.8	58.9	59.3	60.7	55.9	55.1	56.5	52.7	52.2	50.7	46.6	45.9	46.8	45.1	39.7	47.2	43.3
Right Top	64.9	59.8	60.3	56.9	63.4	67.5	67.5	59.4	54.3	56.8	56.3	60.1	55.0	55.4	56.1	52.7	52.7	51.0	47.9	47.2	47.0	46.1	40.9	45.5	43.8
Top	62.3	60.6	59.6	58.3	60.9	64.3	67.7	59.1	57.5	55.8	56.6	56.4	52.5	52.3	52.3	49.9	48.4	49.5	44.4	43.3	46.3	42.7	35.8	41.3	38.5

*The testing environment did not meet the requirements in the ISO-3744 Standard. The presented data in all 1/3 octave bands should be considered as the upper boundary of the exact sound power levels.



SMALL POWER TRANSFORMERS SOUTH BOSTON, VA.

FULL LOAD KVA

10000 KNAN
8000 KNAN
7000 KNAN
5000 KNAN

NUMBER OF RADIATOR BANKS IN SERVICE

4.0
3.0
2.0
1.0

RISE OVER AMBIENT LIMITED TO 65 DEGREE C.

CALCULATED SOUND LEVEL 63.0 DB

CALCULATED EFFICIENCY AND LOSSES

% LOAD	% EFFICIENCY	NO-LOAD LOSS	LOAD LOSS	TOTAL LOSS
25	99.51	9731	2459	12190
50	99.61	9731	9849	19580
75	99.58	9731	22149	31880
100	99.51	9731	39379	49110
125	99.43	9731	61529	71260

INSTRUCTION
BOOK

PC-1002

MFR
ID

1LUS

SERIAL

BS41456 -####

MANUFACTURE
DATE

##/##

UNIT 001
UNIT 002
UNIT 003

GLENGARRY 1 PV SOLAR
HAMILTON SOLAR SITE
EDWARDSBURGH SOLAR 1

PROJECT NAME
PROJECT NAME
PROJECT NAME

MFR. ID SHOP ORDER
1LUS BS41456

MFR. ID DRAWING #
1LUS BS41456N1

CUSTOMER NOTE: N.P. DWG. IS FOR YOUR INFO & REVIEW. THE IMPEDANCE, MANUFACTURE DATE, AND ABB SERIAL NUMBER ARE LEFT BLANK SINCE DRAWING IS SUBMITTED PRIOR TO MANUFACTURING. THE ACTUAL VALUES ARE ENGRAVED ON THE NAMEPLATE AT TIME OF SHIPMENT. THIS DRAWING IS NOT SUBSEQUENTLY REVISED TO ADD TESTED VALUES.

5/16 INCH HOLES FOR 190-32 X 3/16 SCREW
SIZE 6.25 INCHES X 100 INCHES AREA 62.5 SQUARE INCHES
DISTANCE BETWEEN CENTERS OF HOLES ON LONG EDGE 9 19/32 INCH ± 1/64 ON SHORT EDGE 5 27/32 INCH ± 1/64

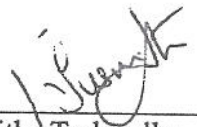
1							
HP.DRAFT. DRAFT. ENGINEER	DATE 02/28/13	HP.DRAFT. DRAFT. ENGINEER	DATE	HP.DRAFT. DRAFT. ENGINEER	DATE	HP.DRAFT. DRAFT. ENGINEER	DATE



Copy of Transformer Type Test Records

Test type:	Sound Test																												
<table border="1"><tr><td>Kva</td><td>300</td><td>500</td><td>750</td><td>1000</td></tr><tr><td>Onan</td><td>48.4</td><td>50.8</td><td>50.2</td><td>48.5</td></tr><tr><td>Actual_SN</td><td>07J800213</td><td>07J776241</td><td>07J795291</td><td>07J790181</td></tr><tr><td>Actual_Date</td><td>19-Jun-07</td><td>8-May-07</td><td>11-Jun-07</td><td>29-May-07</td></tr><tr><td>Actual_HV</td><td>12470</td><td>13200</td><td>13200</td><td>4160</td></tr></table>					Kva	300	500	750	1000	Onan	48.4	50.8	50.2	48.5	Actual_SN	07J800213	07J776241	07J795291	07J790181	Actual_Date	19-Jun-07	8-May-07	11-Jun-07	29-May-07	Actual_HV	12470	13200	13200	4160
Kva	300	500	750	1000																									
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Actual_HV	12470	13200	13200	4160																									
Comments:																													

I testify the data above was taken from records of Engineering Department.


Susmitha Tarlapally
Engineering Dept

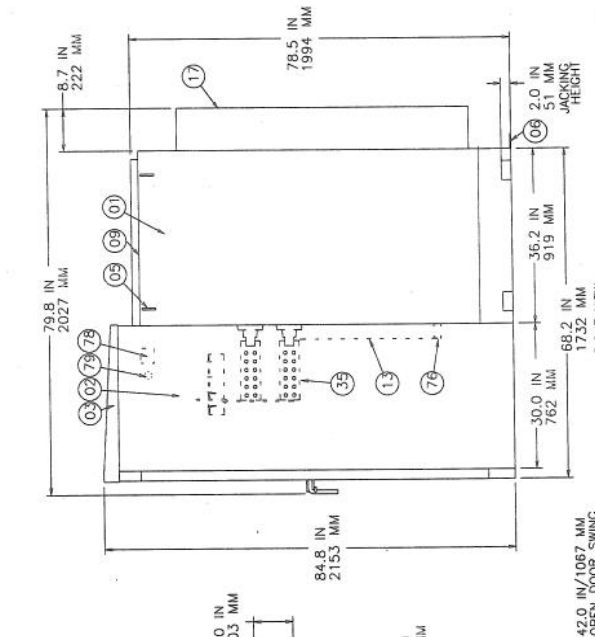
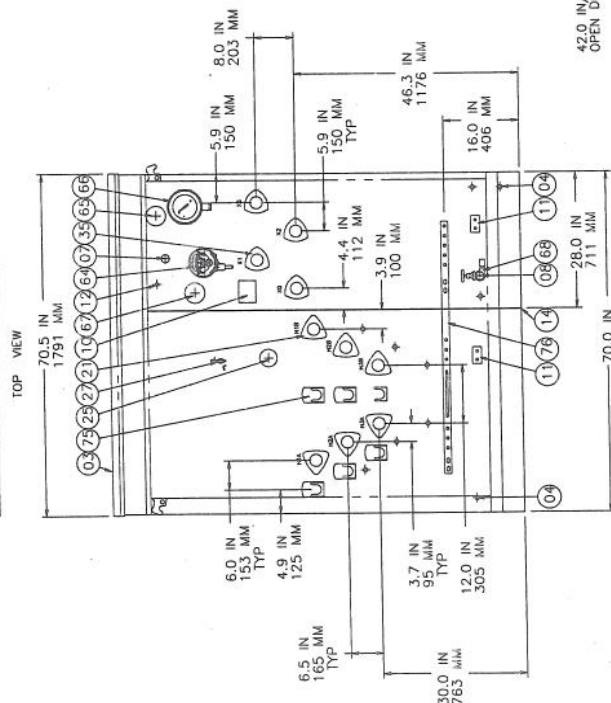
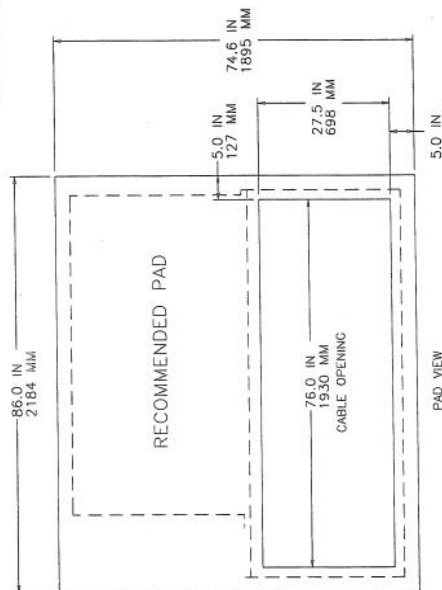
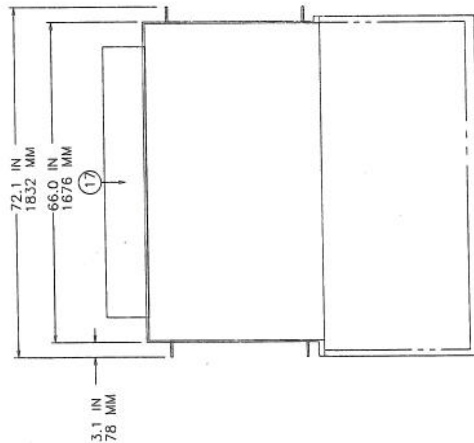
5/31/2012
Date

ABB Inc.

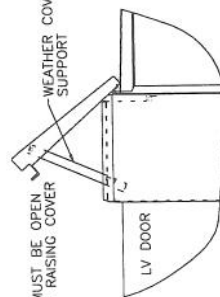
Distribution Transformer Division
500 West Highway 94
Jefferson City MO 65101-5032

Telephone 573-634-2111
Telefax 573-659-6275

ISO 9001 Certified



DOOR MUST BE OPEN
BEFORE RAISING COVER



- | | | |
|----|---|--|
| 01 | TANK | CABINET BOLTED-ON, REMOVABLE FLANGE, HINGED LEFT DOOR, PROVISION FOR PADLOCK, STOP IN OPEN POSITION, HINGED WEATHER COUPLER AND LIFTING HOODS, 4 TOTAL |
| 02 | SHIMMED BRASS VALVE W/PLUG | |
| 03 | 1 INCH DRAIN PLUG | |
| 04 | HAND-OPERATED TANK WALL | |
| 05 | BOLTED-ON MOUNTED ON TANK WALL | |
| 06 | GROUND PAD | |
| 07 | PRESSURE RELIEF ORANGE | |
| 08 | STEEL HOUL-LOW BARRIER WITH INSULATING BARRIER ON HIGH & LOW VOLTAGE SIDES | |
| 09 | HIGH VOLTAGE INTEGRAL NON-LOADBREAK SWITCHING | |
| 10 | 25 TOR TRANSFORMER SWITCH WITH CLOSED POSITIONS FOR OPEN & LOW VOLTAGE BUSHING WITH 12 HOLE | |
| 11 | WINDING TEMPERATURE INDICATOR WITH THREE SETS OF CONTACTS | |
| 12 | PRESSURE VACUUM GAUGE WITH TWO SETS OF CONTACTS | |
| 13 | LEVEL GAUGE WITH TWO SETS OF CONTACTS | |
| 14 | DRAIN VALVE WITH SAMPLER | |
| 15 | PARKING STAND | |
| 16 | GROUND BUS | |
| 17 | COPPER BAR WITH ELEVEN EXTERNAL TAGS (LEFT SIDE) | |
| 18 | PCB FREE DECAL | |
| 19 | COVER MOUNTED PRESSURE RELIEF DEVICE | |
| 20 | EXTERIOR COOL- EQUIPMENT GREEN | |
| 21 | THREE 2500V 15A FUSES SUPPLIED FOR USE WITH COOPER PS 600 A 35 JFV | |
| 22 | CLASS 1-0F1 READABLE CONTACTOR | |
| 23 | SHIELD GROUND | |
| 24 | INTERNALLY REMOVABLE CORE GROUND | |
| 25 | JACKING PADS WITH HOLES FOR PULLING | |

[illegible]

DATA	KVA	RIGHT VIEW
02	1000	H.V. 27600
ARRESTERS WERE ELASTIMOLD 375ESA-27 FIG. 7 INTERFACE SING 12-12-12		L.V. 480V/277

Transformer 10 MV							
NEMA (Nr)							
	3	5	0	-6	-11	-16	A
Correction							-23
Lw	85.6	87.6	82.6	82.6	76.6	71.6	59.6
MV:							63
10*logS:							19.6
S:							91.0
a							4.326
b							4.682
H							3.927

Transformer 1 MV									
NEMA (Nr)									
	3	5	0	-6	-11	-16	-23	48.5	1
Correction								A	15.1
Lw	66.6	68.6	63.6	63.6	57.6	47.6	40.6	64.0	32.4
MV:									48.5
10*logS:									15.1
S:									32.4
a									2.432
b									2.784
H									2.453



ACOUSTICS



NOISE



VIBRATION

APPENDIX D

Details of Predictive Acoustical Modelling



ACOUSTICS



NOISE



VIBRATION

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The predictive model used for this Assessment (*Cadna-A version 4.3.143*) is based on the methods from ISO Standard 9613-2.2 “Acoustics - Attenuation of Sound During Propagation Outdoors” [Ref. 8], which accounts for reduction in sound level with distance due to geometrical spreading, air absorption, ground attenuation and acoustical shielding by intervening structures (or by topography and foliage where applicable). This modeling technique is acceptable to the MOE.

The subject site and surrounding area were modelled as flat ground based on observations made during the March 14, 2011 site visit. Ground attenuation was assumed to be spectral for all sources, with the ground factor (G) assumed to be 0.7 in all areas. The temperature and relative humidity were assumed to be 10° C and 70%, respectively.

The predictive modelling considered one order of reflection, with both onsite and offsite shielding/reflections afforded by buildings, walls, etc., with spectral absorptive characteristics applied to structures as appropriate, typically with values representative of corrugated metal or concrete block. No credit has been assumed in the model for self shielding of the sources on site by the arrays of solar panels themselves. In this regard the predictions are conservative (i.e., may tend to overpredict the sound levels slightly).

All mechanical sources were modeled as point sources of sound and are shown as crosses in Figures 3 and 4.



ACOUSTICS



NOISE



VIBRATION

APPENDIX E

Acoustic Assessment Criteria



ACOUSTICS



NOISE



VIBRATION

The MOE noise assessment guidelines draw a distinction between sound produced by traffic sources and that produced by industrial or commercial activities, which are classified as *stationary sources of sound*. In essence, the sound from the stationary sources is evaluated against (i.e. compared to) the typical background sound at any potentially impacted, sound-sensitive points of reception (e.g., residences). Background sound is considered to include road traffic sound and other typical sounds, but excludes the sound of the facility under assessment. MOE Publication NPC-232, “Sound Level Limits for Stationary Sources in Class 3 Areas (Rural),” is a guideline for developing applicable sound level limits. In general, the acceptability limits for stationary sources are site dependent, and are based on the existing ambient background sound levels in the area of the subject site.

MOE Publication NPC-232 states that the sound level limit for a stationary source that operates during daytime and nighttime hours in a Class 3 (rural) environment is the lower of the minimum one-hour L_{EQ} ambient (background) sound level or the minimum one-hour ninetieth percentile L_{90} sound level plus 10 dB (i.e. $L_{90} + 10$ dB) at any potentially impacted residential point of reception. In addition, NPC-232 also states exclusionary minimum limits of 45 dBA during daytime hours (07:00 – 19:00) and 40 dBA during nighttime hours (19:00 – 07:00).

Based on the rural nature of the area surrounding the subject site, background sound levels are expected to fall below the exclusionary minimum limits stipulated in NPC-232 during the quietest hours of the day and night. Given that the equipment at the subject facility will be energized during the day and night with steady sound emissions when daylight conditions allow, the most stringent nighttime criterion of 40 dBA is the applicable sound level limit at all points of reception.



ACOUSTICS



NOISE



VIBRATION

APPENDIX H

Sample Calculation Results - Condensed, Overall dBA Format

In the following tables of calculation results, the column headings for the various sound attenuation mechanisms follow the terminology of ISO Standard 9613-2. L_x is the A-weighted, one-hour energy-equivalent (or logarithmic-mean impulse) source sound power level, which includes the effects of any source-abatement measures included in the model, and any time-averaging effects for intermittent sources. L_r is the A-weighted, one-hour energy-equivalent (or logarithmic-mean impulse) sound level at the point of reception. The results are presented in terms of overall A-weighted results, at the most impacted off-site point of reception.



ACOUSTICS



NOISE



VIBRATION

R01 Residential Dwelling		523882	4994289	4.5												
SrcID	Src Name	X	Y	Z	Lx	Adv	K0	Dc	Agnd	Abar	Aatm	Afol	Ahaus	Cmet	Refl	Lr
CW_Inv01	Cornwall - Inverter Cluster 01	524310	4994439	2.5	83	64.1	0	0.0	-2.8	0.0	0.2	0.0	0.0	0.0	0.0	22
CW_Inv02	Cornwall - Inverter Cluster 02	524240	4994548	2.5	83	63.9	0	0.0	-2.6	1.8	0.2	0.0	0.0	0.0	0.0	20
CW_Inv03	Cornwall - Inverter Cluster 03	524184	4994642	2.5	83	64.3	0	0.0	-2.8	2.7	0.2	0.0	0.0	0.0	0.0	19
CW_Inv04	Cornwall - Inverter Cluster 04	524111	4994764	2.5	83	65.4	0	0.0	-3.0	0.0	0.3	0.0	0.0	0.0	0.0	21
CW_Inv05	Cornwall - Inverter Cluster 05	524042	4994873	2.5	83	66.6	0	0.0	-3.1	0.0	0.3	0.0	0.0	0.0	0.0	20
CW_Inv06	Cornwall - Inverter Cluster 06	523909	4994780	2.5	83	64.8	0	0.0	-2.9	0.0	0.3	0.0	0.0	0.0	0.0	21
CW_Inv07	Cornwall - Inverter Cluster 07	523977	4994673	2.5	83	62.9	0	0.0	-2.6	0.0	0.2	0.0	0.0	0.0	0.0	23
CW_Inv08	Cornwall - Inverter Cluster 08	524047	4994553	2.5	83	60.9	0	0.0	-2.3	0.0	0.2	0.0	0.0	0.0	0.0	21
CW_Inv09	Cornwall - Inverter Cluster 09	524115	4994452	2.5	83	60.1	0	0.0	-2.1	0.0	0.2	0.0	0.0	0.0	0.0	25
CW_Inv10	Cornwall - Inverter Cluster 10	524166	4994371	2.5	83	60.4	0	0.0	-2.2	0.0	0.2	0.0	0.0	0.0	0.0	25
CW_Sub	Cornwall - Transformer Substation	524396	4994373	3.0	89	65.3	0	0.0	-0.7	0.0	1.5	0.0	0.0	0.0	0.0	25
CW_Trans01	Cornwall - Inverter Transformer 01	524314	4994439	2.0	75	64.2	0	0.0	0.1	0.0	1.4	0.0	0.0	0.0	4.4	14
CW_Trans02	Cornwall - Inverter Transformer 02	524245	4994548	2.0	75	64.0	0	0.0	1.2	7.3	1.4	0.0	0.0	0.0	2.2	3
CW_Trans03	Cornwall - Inverter Transformer 03	524189	4994641	2.0	75	64.4	0	0.0	1.3	8.7	1.4	0.0	0.0	0.0	0.0	--
CW_Trans04	Cornwall - Inverter Transformer 04	524116	4994763	2.0	75	65.5	0	0.0	0.1	0.0	1.6	0.0	0.0	0.0	0.0	8
CW_Trans05	Cornwall - Inverter Transformer 05	524047	4994873	2.0	75	66.7	0	0.0	0.1	0.0	1.7	0.0	0.0	0.0	0.0	6
CW_Trans06	Cornwall - Inverter Transformer 06	523914	4994780	2.0	75	64.8	0	0.0	0.1	0.0	1.5	0.0	0.0	0.0	0.0	8
CW_Trans07	Cornwall - Inverter Transformer 07	523982	4994672	2.0	75	63.0	0	0.0	0.2	0.0	1.2	0.0	0.0	0.0	0.0	10
CW_Trans08	Cornwall - Inverter Transformer 08	524052	4994553	2.0	75	60.9	0	0.0	0.2	0.0	1.0	0.0	0.0	0.0	0.0	13
CW_Trans09	Cornwall - Inverter Transformer 09	524120	4994452	2.0	75	60.2	0	0.0	0.3	0.0	0.9	0.0	0.0	0.0	0.0	13
CW_Trans10	Cornwall - Inverter Transformer 10	524171	4994371	2.0	75	60.6	0	0.0	0.5	1.6	1.0	0.0	0.0	0.0	0.0	11
NS-01	Inverter House MV1	524587	4994981	1.5	88	70.9	0	0.0	1.3	0.0	2.9	0.0	0.0	0.0	0.0	13
NS-02	Inverter House MV2	524595	4995076	1.5	91	71.5	0	0.0	1.3	0.0	3.1	0.0	0.0	0.0	0.0	15
NS-03	Inverter House MV3	524627	4994781	1.5	91	70.0	0	0.0	1.2	0.0	2.7	0.0	0.0	0.0	0.0	17
NS-04	Inverter House MV4	524638	4994914	1.5	91	70.8	0	0.0	1.3	0.0	2.9	0.0	0.0	0.0	0.0	16
NS-05	Inverter House MV5	524652	4995066	1.5	91	71.8	0	0.0	1.3	0.0	3.1	0.0	0.0	0.0	0.0	15
NS-06	Inverter House MV6	524754	4995247	1.5	91	73.3	0	0.0	1.4	0.0	3.5	0.0	0.0	0.0	0.0	13
NS-07	Inverter House MV7	524896	4994772	1.5	91	72.0	0	0.0	1.3	0.0	3.2	0.0	0.0	0.0	0.0	15
NS-08	Inverter House MV8	524908	4994905	1.5	91	72.6	0	0.0	1.4	0.0	3.3	0.0	0.0	0.0	0.0	14
NS-09	Inverter House MV9	524921	4995057	1.5	91	73.2	0	0.0	1.4	0.0	3.5	0.0	0.0	0.0	0.0	13
NS-10	Inverter House MV10	524968	4994933	1.5	91	73.0	0	0.0	1.4	0.0	3.5	0.0	0.0	0.0	0.0	13
NS-11	Transformer 1 MVA (MV1)	524592	4994980	1.5	69	70.9	0	0.0	1.4	0.0	2.5	0.0	0.0	0.0	0.0	--
NS-12	Transformer 1 MVA (MV2)	524600	4995075	1.5	69	71.5	0	0.0	1.4	0.0	2.7	0.0	0.0	0.0	0.0	--
NS-13	Transformer 1 MVA (MV3)	524622	4994782	1.5	69	70.0	0	0.0	1.4	0.0	2.3	0.0	0.0	0.0	0.0	--
NS-14	Transformer 1 MVA (MV4)	524634	4994914	1.5	69	70.8	0	0.0	1.4	0.0	2.5	0.0	0.0	0.0	0.0	--
NS-15	Transformer 1 MVA (MV5)	524647	4995067	1.5	69	71.8	0	0.0	1.5	0.0	2.7	0.0	0.0	0.0	0.0	--
NS-16	Transformer 1 MVA (MV6)	524750	4995247	1.5	69	73.2	0	0.0	1.5	0.0	3.1	0.0	0.0	0.0	0.0	--
NS-17	Transformer 1 MVA (MV7)	524901	4994772	1.5	69	72.0	0	0.0	1.5	0.0	2.8	0.0	0.0	0.0	0.0	--
NS-18	Transformer 1 MVA (MV8)	524913	4994905	1.5	69	72.6	0	0.0	1.5	0.0	2.9	0.0	0.0	0.0	0.0	--
NS-19	Transformer 1 MVA (MV9)	524926	4995056	1.5	69	73.3	0	0.0	1.5	0.0	3.1	0.0	0.0	0.0	0.0	--
NS-20	Transformer 1 MVA (MV10)	524963	4994933	1.5	69	73.0	0	0.0	1.5	0.0	3.1	0.0	0.0	0.0	0.0	--
NS-21	Transformer 10 MVA	525013	4994843	2.0	88	73.0	0	0.0	0.4	0.0	3.1	0.0	0.0	0.0	0.0	12

R02 Residential Dwelling		523967	4994224	4.5												
Src ID	Src Name		Y	Z	Lx	Adv	K0	Dc	Agnd	Abar	Aatm	Afol	Ahaus	Cmet	Refl	Lr
CW_Inv01	Cornwall - Inverter Cluster 01	524310	4994439	2.5	83	63.2	0	0.0	-2.7	0.0	0.2	0.0	0.0	0.0	0.0	23
CW_Inv02	Cornwall - Inverter Cluster 02	524240	4994548	2.5	83	63.6	0	0.0	-2.7	2.8	0.2	0.0	0.0	0.0	0.0	20
CW_Inv03	Cornwall - Inverter Cluster 03	524184	4994642	2.5	83	64.5	0	0.0	-2.9	3.6	0.2	0.0	0.0	0.0	0.0	18
CW_Inv04	Cornwall - Inverter Cluster 04	524111	4994764	2.5	83	66.0	0	0.0	-3.1	0.0	0.3	0.0	0.0	0.0	0.0	20
CW_Inv05	Cornwall - Inverter Cluster 05	524042	4994873	2.5	83	67.3	0	0.0	-3.2	0.0	0.3	0.0	0.0	0.0	0.0	19
CW_Inv06	Cornwall - Inverter Cluster 06	523909	4994780	2.5	83	66.0	0	0.0	-3.1	0.0	0.3	0.0	0.0	0.0	0.0	20
CW_Inv07	Cornwall - Inverter Cluster 07	523977	4994673	2.5	83	64.1	0	0.0	-2.8	0.0	0.2	0.0	0.0	0.0	0.0	22
CW_Inv08	Cornwall - Inverter Cluster 08	524047	4994553	2.5	83	61.6	0	0.0	-2.4	0.0	0.2	0.0	0.0	0.0	0.0	24
CW_Inv09	Cornwall - Inverter Cluster 09	524115	4994452	2.5	83	59.7	0	0.0	-2.0	0.0	0.2	0.0	0.0	0.0	0.0	26
CW_Inv10	Cornwall - Inverter Cluster 10	524166	4994371	2.5	83	58.9	0	0.0	-1.4	1.2	0.1	0.0	0.0	0.0	0.0	25
CW_Sub	Cornwall - Transformer Substation	524396	4994373	3.0	89	64.2	0	0.0	-0.7	0.0	1.4	0.0	0.0	0.0	1.1	25
CW_Trans01	Cornwall - Inverter Transformer 01	524314	4994439	2.0	75	63.2	0	0.0	0.2	0.0	1.3	0.0	0.0	0.0	4.5	15
CW_Trans02	Cornwall - Inverter Transformer 02	524245	4994548	2.0	75	63.6	0	0.0	1.3	8.9	1.3	0.0	0.0	0.0	0.0	--
CW_Trans03	Cornwall - Inverter Transformer 03	524189	4994641	2.0	75	64.5	0	0.0	1.4	9.5	1.4	0.0	0.0	0.0	0.0	--
CW_Trans04	Cornwall - Inverter Transformer 04	524116	4994763	2.0	75	66.0	0	0.0	0.1	0.0	1.6	0.0	0.0	0.0	0.0	7
CW_Trans05	Cornwall - Inverter Transformer 05	524047	4994873	2.0	75	67.3	0	0.0	0.1	0.0	1.9	0.0	0.0	0.0	0.0	6
CW_Trans06	Cornwall - Inverter Transformer 06	523914	4994780	2.0	75	65.9	0	0.0	0.1	0.0	1.6	0.0	0.0	0.0	0.0	7
CW_Trans07	Cornwall - Inverter Transformer 07	523982	4994672	2.0	75	64.1	0	0.0	0.1	0.0	1.4	0.0	0.0	0.0	0.0	9
CW_Trans08	Cornwall - Inverter Transformer 08	524052	4994553	2.0	75	61.6	0	0.0	0.2	0.0	1.1	0.0	0.0	0.0	0.0	12
CW_Trans09	Cornwall - Inverter Transformer 09	524120	4994452	2.0	75	59.8	0	0.0	0.3	0.0	0.9	0.0	0.0	0.0	0.0	14
CW_Trans10	Cornwall - Inverter Transformer 10	524171	4994371	2.0	75	59.0	0	0.0	1.2	4.9	0.8	0.0	0.0	0.0	0.0	9
NS-01	Inverter House MV1	524587	4994981	1.5	88	70.8	0	0.0	1.2	0.0	2.9	0.0	0.0	0.0	0.0	13
NS-02	Inverter House MV2	524595	4995076	1.5	91	71.5	0	0.0	1.3	0.0	3.1	0.0	0.0	0.0	0.0	15
NS-03	Inverter House MV3	524627	4994781	1.5	91	69.7	0	0.0	1.2	0.0	2.7	0.0	0.0	0.0	0.0	18
NS-04	Inverter House MV4	524638	4994914	1.5	91	70.7	0	0.0	1.2	0.0	2.9	0.0	0.0	0.0	0.0	17
NS-05	Inverter House MV5	524652	4995066	1.5	91	71.7	0	0.0	1.3	0.0	3.1	0.0	0.0	0.0	0.0	15
NS-06	Inverter House MV6	524754	4995247	1.5	91	73.2	0	0.0	1.4	0.0	3.5	0.0	0.0	0.0	0.0	13
NS-07	Inverter House MV7	524896	4994772	1.5	91	71.7	0	0.0	1.3	0.0	3.1	0.0	0.0	0.0	0.0	15
NS-08	Inverter House MV8	524908	4994905	1.5	91	72.3	0	0.0	1.4	0.0	3.3	0.0	0.0	0.0	0.0	14
NS-09	Inverter House MV9	524921	4995057	1.5	91	73.1	0	0.0	1.4	0.0	3.5	0.0	0.0	0.0	0.0	13
NS-10	Inverter House MV10	524968	4994933	1.5	91	72.8	0	0.0	1.4	0.0	3.4	0.0	0.0	0.0	0.0	14
NS-11	Transformer 1 MVA (MV1)	524592	4994980	1.5	69	70.8	0	0.0	1.4	0.0	2.5	0.0	0.0	0.0	0.0	--
NS-12	Transformer 1 MVA (MV2)	524600	4995075	1.5	69	71.5	0	0.0	1.4	0.0	2.7	0.0	0.0	0.0	0.0	--
NS-13	Transformer 1 MVA (MV3)	524622	4994782	1.5	69	69.7	0	0.0	1.4	0.0	2.3	0.0	0.0	0.0	0.0	--
NS-14	Transformer 1 MVA (MV4)	524634	4994914	1.5	69	70.7	0	0.0	1.4	0.0	2.5	0.0	0.0	0.0	0.0	--
NS-15	Transformer 1 MVA (MV5)	524647	4995067	1.5	69	71.7	0	0.0	1.4	0.0	2.7	0.0	0.0	0.0	0.0	--
NS-16	Transformer 1 MVA (MV6)	524750	4995247	1.5	69	73.2	0	0.0	1.5	0.0	3.1	0.0	0.0	0.0	0.0	--
NS-17	Transformer 1 MVA (MV7)	524901	4994772	1.5	69	71.7	0	0.0	1.4	0.0	2.7	0.0	0.0	0.0	0.0	--
NS-18	Transformer 1 MVA (MV8)	524913	4994905	1.5	69	72.3	0	0.0	1.5	0.0	2.9	0.0	0.0	0.0	0.0	--
NS-19	Transformer 1 MVA (MV9)	524925	4995056	1.5	69	73.1	0	0.0	1.5	0.0	3.1	0.0	0.0	0.0	0.0	--
NS-20	Transformer 1 MVA (MV10)	524963	4994933	1.5	69	72.8	0	0.0	1.5	0.0	3.0	0.0	0.0	0.0	0.0	--
NS-21	Transformer 10 MVA	525013	4994843	2.0	88	72.7	0	0.0	0.3	0.0	3.0	0.0	0.0	0.0	0.0	12

R03	Residential Dwelling	524307	4994276	4.5												
Src ID	Src Name	Y	Z	Lx	Adiv	KD	Dc	Agnd	Abar	Aatm	Afol	Ahou	Cmet	Refl	Lr	
CW_InV01	Cornwall - Inverter Cluster 01	524310	4994439	2.5	83	59.3	0	0.0	-1.9	0.0	0.1	0.0	0.0	0.0	26	
CW_InV02	Cornwall - Inverter Cluster 02	524240	4994548	2.5	83	60.6	0	0.0	-2.3	3.9	0.2	0.0	0.0	0.0	21	
CW_InV03	Cornwall - Inverter Cluster 03	524184	4994642	2.5	83	62.5	0	0.0	-2.6	4.4	0.2	0.0	0.0	0.0	19	
CW_InV04	Cornwall - Inverter Cluster 04	524111	4994764	2.5	83	64.8	0	0.0	-2.9	0.0	0.3	0.0	0.0	0.0	21	
CW_InV05	Cornwall - Inverter Cluster 05	524042	4994873	2.5	83	66.6	0	0.0	-3.1	0.0	0.3	0.0	0.0	0.0	20	
CW_InV06	Cornwall - Inverter Cluster 06	523909	4994780	2.5	83	65.7	0	0.0	-3.0	0.0	0.3	0.0	0.0	0.0	20	
CW_InV07	Cornwall - Inverter Cluster 07	523977	4994673	2.5	83	63.4	0	0.0	-2.7	0.0	0.2	0.0	0.0	0.0	22	
CW_InV08	Cornwall - Inverter Cluster 08	524047	4994553	2.5	83	60.0	0	0.0	-2.1	0.0	0.2	0.0	0.0	0.0	25	
CW_InV09	Cornwall - Inverter Cluster 09	524115	4994452	2.5	83	55.9	0	0.0	-1.4	0.0	0.1	0.0	0.0	0.0	29	
CW_InV10	Cornwall - Inverter Cluster 10	524166	4994371	2.5	83	52.0	0	0.0	-1.2	2.6	0.1	0.0	0.0	0.0	30	
CW_Sub	Cornwall - Transformer Substation	524396	4994373	3.0	89	60.7	0	0.0	-0.5	0.0	1.0	0.0	0.0	0.0	1.1	
CW_Trans01	Cornwall - Inverter Transformer 01	524314	4994439	2.0	75	59.4	0	0.0	0.3	0.0	0.9	0.0	0.0	0.0	4.5	
CW_Trans02	Cornwall - Inverter Transformer 02	524245	4994548	2.0	75	60.7	0	0.0	1.4	10.0	1.0	0.0	0.0	0.0	2	
CW_Trans03	Cornwall - Inverter Transformer 03	524189	4994641	2.0	75	62.5	0	0.0	1.4	10.3	1.2	0.0	0.0	0.0	--	
CW_Trans04	Cornwall - Inverter Transformer 04	524116	4994763	2.0	75	64.8	0	0.0	0.1	0.0	1.5	0.0	0.0	0.0	8	
CW_Trans05	Cornwall - Inverter Transformer 05	524047	4994873	2.0	75	66.6	0	0.0	0.1	0.0	1.7	0.0	0.0	0.0	6	
CW_Trans06	Cornwall - Inverter Transformer 06	523914	4994780	2.0	75	65.6	0	0.0	0.1	0.0	1.6	0.0	0.0	0.0	7	
CW_Trans07	Cornwall - Inverter Transformer 07	523982	4994672	2.0	75	63.4	0	0.0	0.2	0.0	1.3	0.0	0.0	0.0	10	
CW_Trans08	Cornwall - Inverter Transformer 08	524052	4994553	2.0	75	60.0	0	0.0	0.3	0.0	0.9	0.0	0.0	0.0	14	
CW_Trans09	Cornwall - Inverter Transformer 09	524120	4994452	2.0	75	55.9	0	0.0	0.5	0.0	0.6	0.0	0.0	0.0	18	
CW_Trans10	Cornwall - Inverter Transformer 10	524171	4994371	2.0	75	52.2	0	0.0	1.2	6.6	0.4	0.0	0.0	0.0	14	
NS-01	Inverter House MV1	524587	4994981	1.5	88	69.6	0	0.0	1.2	0.0	2.6	0.0	0.0	0.0	15	
NS-02	Inverter House MV2	524595	4995076	1.5	91	70.4	0	0.0	1.2	0.0	2.8	0.0	0.0	0.0	17	
NS-03	Inverter House MV3	524627	4994781	1.5	91	68.2	0	0.0	1.1	0.0	2.3	0.0	0.0	0.0	20	
NS-04	Inverter House MV4	524638	4994914	1.5	91	69.4	0	0.0	1.1	0.0	2.6	0.0	0.0	0.0	18	
NS-05	Inverter House MV5	524652	4995066	1.5	91	70.7	0	0.0	1.2	0.0	2.9	0.0	0.0	0.0	17	
NS-06	Inverter House MV6	524754	4995247	1.5	91	72.3	0	0.0	1.4	0.0	3.3	0.0	0.0	0.0	14	
NS-07	Inverter House MV7	524896	4994772	1.5	91	70.4	0	0.0	1.2	0.0	2.8	0.0	0.0	0.0	17	
NS-08	Inverter House MV8	524908	4994905	1.5	91	71.2	0	0.0	2.2	2.1	3.0	0.0	0.0	0.0	13	
NS-09	Inverter House MV9	524921	4995057	1.5	91	72.1	0	0.0	1.3	0.0	3.2	0.0	0.0	0.0	15	
NS-10	Inverter House MV10	524968	4994933	1.5	91	71.7	0	0.0	1.3	0.0	3.1	0.0	0.0	0.0	15	
NS-11	Transformer 1 MVA (MV1)	524592	4994980	1.5	69	69.6	0	0.0	1.4	0.0	2.2	0.0	0.0	0.0	--	
NS-12	Transformer 1 MVA (MV2)	524600	4995075	1.5	69	70.5	0	0.0	1.4	0.0	2.4	0.0	0.0	0.0	--	
NS-13	Transformer 1 MVA (MV3)	524622	4994782	1.5	69	68.2	0	0.0	1.3	0.0	2.0	0.0	0.0	0.0	--	
NS-14	Transformer 1 MVA (MV4)	524634	4994914	1.5	69	69.4	0	0.0	1.3	0.0	2.2	0.0	0.0	0.0	--	
NS-15	Transformer 1 MVA (MV5)	524647	4995067	1.5	69	70.6	0	0.0	1.4	0.0	2.5	0.0	0.0	0.0	--	
NS-16	Transformer 1 MVA (MV6)	524750	4995247	1.5	69	72.3	0	0.0	1.5	0.0	2.9	0.0	0.0	0.0	--	
NS-17	Transformer 1 MVA (MV7)	524901	4994772	1.5	69	70.4	0	0.0	1.4	0.0	2.4	0.0	0.0	0.0	--	
NS-18	Transformer 1 MVA (MV8)	524913	4994905	1.5	69	71.2	0	0.0	2.2	2.3	2.6	0.0	0.0	0.0	--	
NS-19	Transformer 1 MVA (MV9)	524926	4995056	1.5	69	72.1	0	0.0	1.5	0.0	2.8	0.0	0.0	0.0	--	
NS-20	Transformer 1 MVA (MV10)	524963	4994933	1.5	69	71.7	0	0.0	2.2	2.2	2.7	0.0	0.0	0.0	--	
NS-21	Transformer 10 MVA	525013	4994843	2.0	88	71.6	0	0.0	0.3	0.0	2.7	0.0	0.0	0.0	13	

R04	Residential Dwelling	524335	4994304	4.5												
Src ID	Src Name	Y	Z	Lx	Adiv	KD	Dc	Agnd	Abar	Aatm	Afol	Ahou	Cmet	Refl	Lr	
CW_InV01	Cornwall - Inverter Cluster 01	524310	4994439	2.5	83	53.8	0	0.0	-1.4	0.0	0.1	0.0	0.0	0.0	32	
CW_InV02	Cornwall - Inverter Cluster 02	524240	4994548	2.5	83	59.4	0	0.0	-1.9	4.9	0.1	0.0	0.0	0.0	21	
CW_InV03	Cornwall - Inverter Cluster 03	524184	4994642	2.5	83	62.4	0	0.0	-2.5	4.7	0.2	0.0	0.0	0.0	19	
CW_InV04	Cornwall - Inverter Cluster 04	524111	4994764	2.5	83	65.2	0	0.0	-3.0	0.0	0.3	0.0	0.0	0.0	21	
CW_InV05	Cornwall - Inverter Cluster 05	524042	4994873	2.5	83	67.1	0	0.0	-3.2	0.0	0.3	0.0	0.0	0.0	19	
CW_InV06	Cornwall - Inverter Cluster 06	523909	4994780	2.5	83	67.1	0	0.0	-3.2	0.0	0.3	0.0	0.0	0.0	19	
CW_InV07	Cornwall - Inverter Cluster 07	523977	4994673	2.5	83	65.2	0	0.0	-3.0	0.0	0.3	0.0	0.0	0.0	21	
CW_InV08	Cornwall - Inverter Cluster 08	524047	4994553	2.5	83	62.6	0	0.0	-2.6	0.0	0.2	0.0	0.0	0.0	23	
CW_InV09	Cornwall - Inverter Cluster 09	524115	4994452	2.5	83	59.5	0	0.0	-1.9	0.0	0.1	0.0	0.0	0.0	26	
CW_InV10	Cornwall - Inverter Cluster 10	524166	4994371	2.5	83	56.2	0	0.0	-1.0	1.1	0.1	0.0	0.0	0.0	27	
CW_Sub	Cornwall - Transformer Substation	524396	4994373	3.0	89	50.3	0	0.0	0.0	5.4	0.3	0.0	0.0	0.0	33	
CW_Trans01	Cornwall - Inverter Transformer 01	524314	4994439	2.0	75	53.7	0	0.0	0.4	0.0	0.5	0.0	0.0	0.0	2.7	
CW_Trans02	Cornwall - Inverter Transformer 02	524245	4994548	2.0	75	59.3	0	0.0	1.5	10.4	0.9	0.0	0.0	0.0	3	
CW_Trans03	Cornwall - Inverter Transformer 03	524189	4994641	2.0	75	62.3	0	0.0	1.4	10.1	1.2	0.0	0.0	0.0	--	
CW_Trans04	Cornwall - Inverter Transformer 04	524116	4994763	2.0	75	65.1	0	0.0	0.1	0.0	1.5	0.0	0.0	0.0	8	
CW_Trans05	Cornwall - Inverter Transformer 05	524047	4994873	2.0	75	67.1	0	0.0	0.1	0.0	1.8	0.0	0.0	0.0	6	
CW_Trans06	Cornwall - Inverter Transformer 06	523914	4994780	2.0	75	67.1	0	0.0	0.1	0.0	1.8	0.0	0.0	0.0	6	
CW_Trans07	Cornwall - Inverter Transformer 07	523982	4994672	2.0	75	65.2	0	0.0	0.1	0.0	1.5	0.0	0.0	0.0	8	
CW_Trans08	Cornwall - Inverter Transformer 08	524052	4994553	2.0	75	62.5	0	0.0	0.2	0.0	1.2	0.0	0.0	0.0	11	
CW_Trans09	Cornwall - Inverter Transformer 09	524120	4994452	2.0	75	59.3	0	0.0	0.3	0.0	0.9	0.0	0.0	0.0	14	
CW_Trans10	Cornwall - Inverter Transformer 10	524171	4994371	2.0	75	56.0	0	0.0	0.5	0.0	0.6	0.0	0.0	0.0	18	
NS-01	Inverter House MV1	524587	4994981	1.5	88	68.2	0	0.0	1.1	0.0	2.3	0.0	0.0	0.0	17	
NS-02	Inverter House MV2	524595	4995076	1.5	91	69.2	0	0.0	1.1	0.0	2.5	0.0	0.0	0.0	18	
NS-03	Inverter House MV3	524627	4994781	1.5	91	66.0	0	0.0	0.9	0.0	1.9	0.0	0.0	0.0	22	
NS-04	Inverter House MV4	524638	4994914	1.5	91	67.7	0	0.0	1.0	0.0	2.2	0.0	0.0	0.0	20	
NS-05	Inverter House MV5	524652	4995066	1.5	91	69.3	0	0.0	1.1	0.0	2.6	0.0	0.0	0.0	18	
NS-06	Inverter House MV6	524754	4995247	1.5	91	71.3	0	0.0	1.3	0.0	3.0	0.0	0.0	0.0	16	
NS-07	Inverter House MV7	524896	4994772	1.5	91	68.3	0	0.0	1.1	0.0	2.4	0.0	0.0	0.0	20	
NS-08	Inverter House MV8	524908	4994905	1.5	91	69.4	0	0.0	1.1	0.0	2.6	0.0	0.0	0.0	18	
NS-09	Inverter House MV9	524921	4995057	1.5	91	70.6	0	0.0	1.2	0.0	2.8	0.0	0.0	0.0	17	
NS-10	Inverter House MV10	524968	4994933	1.5	91	70.0	0	0.0	1.2	0.0	2.7	0.0	0.0	0.0	17	
NS-11	Transformer 1 MVA (MV1)	524592	4994980	1.5	69	68.2	0	0.0	1.3	0.0	2.0	0.0	0.0	0.0	--	
NS-12	Transformer 1 MVA (MV2)	524600	4995075	1.5	69	69.2	0	0.0	1.3	0.0	2.2	0.0	0.0	0.0	--	
NS-13	Transformer 1 MVA (MV3)	524622	4994782	1.5	69	65.9	0	0.0	1.2	0.0	1.6	0.0	0.0	0.0	0	
NS-14	Transformer 1 MVA (MV4)	524634	4994914	1.5	69	67.6	0	0.0	1.3	0.0	1.9	0.0	0.0	0.0	--	
NS-15	Transformer 1 MVA (MV5)	524647	4995067	1.5	69	69.3	0	0.0	1.3	0.0	2.2	0.0	0.0	0.0	--	
NS-16	Transformer 1 MVA (MV6)	524750	4995247	1.5	69	71.3	0	0.0	1.4	0.0	2.6	0.0	0.0	0.0	--	
NS-17	Transformer 1 MVA (MV7)	524901	4994772	1.5	69	68.3	0	0.0	1.3	0.0	2.0	0.0	0.0	0.0	--	
NS-18	Transformer 1 MVA (MV8)	524913	4994905	1.5	69	69.4	0	0.0	1.3	0.0	2.2	0.0	0.0	0.0	--	
NS-19	Transformer 1 MVA (MV9)	524926	4995056	1.5	69	70.6	0	0.0	1.4	0.0	2.5	0.0	0.0	0.0	--	
NS-20	Transformer 1 MVA (MV10)	524963	4994933	1.5	69	70.0	0	0.0	1.4	0.0	2.3	0.0	0.0	0.0	--	
NS-21	Transformer 10 MVA	525013	4994843	2.0	88	69.8	0	0.0	0.3	0.0	2.3	0.0	0.0	0.0	16	

R05 Residential Dwelling		524558	4994413	4.5												
Src ID	Src Name	Y	Z	Lx	Adiv	KD	Dc	Agnd	Abar	Aatm	Afol	Ahaus	Cmet	Refi	Lr	
CW_Inv01	Cornwall - Inverter Cluster 01	524310	4994439	2.5	83	59.0	0	0.0	-1.7	2.2	0.1	0.0	0.0	0.0	24	
CW_Inv02	Cornwall - Inverter Cluster 02	524240	4994548	2.5	83	61.8	0	0.0	-2.1	3.3	0.2	0.0	0.0	0.0	20	
CW_Inv03	Cornwall - Inverter Cluster 03	524184	4994642	2.5	83	63.8	0	0.0	-2.5	3.6	0.2	0.0	0.0	0.0	18	
CW_Inv04	Cornwall - Inverter Cluster 04	524111	4994764	2.5	83	66.1	0	0.0	-3.1	0.0	0.3	0.0	0.0	0.0	20	
CW_Inv05	Cornwall - Inverter Cluster 05	524042	4994873	2.5	83	67.8	0	0.0	-3.3	0.0	0.3	0.0	0.0	0.0	19	
CW_Inv06	Cornwall - Inverter Cluster 06	523909	4994780	2.5	83	68.5	0	0.0	-3.3	0.0	0.4	0.0	0.0	0.0	18	
CW_Inv07	Cornwall - Inverter Cluster 07	523977	4994673	2.5	83	67.1	0	0.0	-3.2	0.0	0.3	0.0	0.0	0.0	19	
CW_Inv08	Cornwall - Inverter Cluster 08	524047	4994553	2.5	83	65.5	0	0.0	-3.0	0.0	0.3	0.0	0.0	0.0	21	
CW_Inv09	Cornwall - Inverter Cluster 09	524115	4994452	2.5	83	64.0	0	0.0	-2.8	0.0	0.2	0.0	0.0	0.0	22	
CW_Inv10	Cornwall - Inverter Cluster 10	524166	4994371	2.5	83	62.9	0	0.0	-2.6	0.0	0.2	0.0	0.0	0.0	23	
CW_Sub	Cornwall - Transformer Substation	524396	4994373	3.0	89	55.4	0	0.0	0.2	5.3	0.6	0.0	0.0	0.0	27	
CW_Trans01	Cornwall - Inverter Transformer 01	524314	4994439	2.0	75	58.8	0	0.0	1.4	9.4	0.8	0.0	0.0	0.0	4	
CW_Trans02	Cornwall - Inverter Transformer 02	524245	4994548	2.0	75	61.7	0	0.0	1.4	10.1	1.1	0.0	0.0	0.0	1	
CW_Trans03	Cornwall - Inverter Transformer 03	524189	4994641	2.0	75	63.8	0	0.0	1.4	9.8	1.3	0.0	0.0	0.0	--	
CW_Trans04	Cornwall - Inverter Transformer 04	524116	4994763	2.0	75	66.0	0	0.0	0.1	0.0	1.6	0.0	0.0	0.0	7	
CW_Trans05	Cornwall - Inverter Transformer 05	524047	4994873	2.0	75	67.8	0	0.0	0.1	0.0	1.9	0.0	0.0	0.0	5	
CW_Trans06	Cornwall - Inverter Transformer 06	523914	4994780	2.0	75	68.4	0	0.0	0.1	0.0	2.1	0.0	0.0	0.0	4	
CW_Trans07	Cornwall - Inverter Transformer 07	523982	4994672	2.0	75	67.0	0	0.0	0.1	0.0	1.8	0.0	0.0	0.0	6	
CW_Trans08	Cornwall - Inverter Transformer 08	524052	4994553	2.0	75	65.4	0	0.0	0.1	0.0	1.5	0.0	0.0	0.0	8	
CW_Trans09	Cornwall - Inverter Transformer 09	524120	4994452	2.0	75	63.9	0	0.0	0.1	0.0	1.3	0.0	0.0	0.0	9	
CW_Trans10	Cornwall - Inverter Transformer 10	524171	4994371	2.0	75	62.8	0	0.0	0.2	0.0	1.2	0.0	0.0	0.0	11	
NS-01	Inverter House MV1	524587	4994981	1.5	88	66.1	0	0.0	0.9	0.0	2.0	0.0	0.0	0.0	19	
NS-02	Inverter House MV2	524595	4995076	1.5	91	67.4	0	0.0	1.0	0.0	2.2	0.0	0.0	0.0	21	
NS-03	Inverter House MV3	524627	4994781	1.5	91	62.5	0	0.0	0.8	0.0	1.5	0.0	0.0	0.0	27	
NS-04	Inverter House MV4	524638	4994914	1.5	91	65.1	0	0.0	0.9	0.0	1.8	0.0	0.0	0.0	24	
NS-05	Inverter House MV5	524652	4995066	1.5	91	67.4	0	0.0	1.0	0.0	2.2	0.0	0.0	0.0	21	
NS-06	Inverter House MV6	524754	4995247	1.5	91	69.7	0	0.0	1.2	0.0	2.6	0.0	0.0	0.0	18	
NS-07	Inverter House MV7	524896	4994772	1.5	91	64.9	0	0.0	0.9	0.0	1.8	0.0	0.0	0.0	24	
NS-08	Inverter House MV8	524908	4994905	1.5	91	66.6	0	0.0	1.0	0.0	2.0	0.0	0.0	0.0	22	
NS-09	Inverter House MV9	524921	4995057	1.5	91	68.4	0	0.0	1.1	0.0	2.4	0.0	0.0	0.0	20	
NS-10	Inverter House MV10	524968	4994933	1.5	91	67.4	0	0.0	1.0	0.0	2.2	0.0	0.0	0.0	21	
NS-11	Transformer 1 MVA (MV1)	524592	4994980	1.5	69	66.1	0	0.0	1.2	0.0	1.6	0.0	0.0	0.0	0	
NS-12	Transformer 1 MVA (MV2)	524600	4995075	1.5	69	67.4	0	0.0	1.3	0.0	1.8	0.0	0.0	0.0	--	
NS-13	Transformer 1 MVA (MV3)	524622	4994782	1.5	69	62.5	0	0.0	1.2	0.0	1.1	0.0	0.0	0.0	4	
NS-14	Transformer 1 MVA (MV4)	524634	4994914	1.5	69	65.1	0	0.0	1.2	0.0	1.5	0.0	0.0	0.0	1	
NS-15	Transformer 1 MVA (MV5)	524647	4995067	1.5	69	67.4	0	0.0	1.3	0.0	1.8	0.0	0.0	0.0	--	
NS-16	Transformer 1 MVA (MV6)	524750	4995247	1.5	69	69.6	0	0.0	1.4	0.0	2.3	0.0	0.0	0.0	--	
NS-17	Transformer 1 MVA (MV7)	524901	4994772	1.5	69	64.9	0	0.0	1.2	0.0	1.5	0.0	0.0	0.0	1	
NS-18	Transformer 1 MVA (MV8)	524913	4994905	1.5	69	66.7	0	0.0	1.2	0.0	1.7	0.0	0.0	0.0	--	
NS-19	Transformer 1 MVA (MV9)	524926	4995056	1.5	69	68.4	0	0.0	1.3	0.0	2.0	0.0	0.0	0.0	--	
NS-20	Transformer 1 MVA (MV10)	524963	4994933	1.5	69	67.4	0	0.0	1.3	0.0	1.8	0.0	0.0	0.0	--	
NS-21	Transformer 10 MVA	525013	4994843	2.0	88	66.9	0	0.0	0.2	0.0	1.7	0.0	0.0	0.0	19	

R06 Residential Dwelling		524546	4994326	4.5												
Src ID	Src Name	Y	Z	Lx	Adiv	KD	Dc	Agnd	Abar	Aatm	Afol	Ahaus	Cmet	Refi	Lr	
CW_Inv01	Cornwall - Inverter Cluster 01	524310	4994439	2.5	83	59.4	0	0.0	-1.9	0.0	0.1	0.0	0.0	0.0	26	
CW_Inv02	Cornwall - Inverter Cluster 02	524240	4994548	2.5	83	62.6	0	0.0	-2.4	3.9	0.2	0.0	0.0	0.0	19	
CW_Inv03	Cornwall - Inverter Cluster 03	524184	4994642	2.5	83	64.6	0	0.0	-2.6	4.0	0.3	0.0	0.0	0.0	17	
CW_Inv04	Cornwall - Inverter Cluster 04	524111	4994764	2.5	83	66.8	0	0.0	-3.2	0.0	0.3	0.0	0.0	0.0	19	
CW_Inv05	Cornwall - Inverter Cluster 05	524042	4994873	2.5	83	68.4	0	0.0	-3.3	0.0	0.4	0.0	0.0	0.0	18	
CW_Inv06	Cornwall - Inverter Cluster 06	523909	4994780	2.5	83	68.9	0	0.0	-2.8	1.1	0.4	0.0	0.0	0.0	16	
CW_Inv07	Cornwall - Inverter Cluster 07	523977	4994673	2.5	83	67.5	0	0.0	-3.2	0.0	0.3	0.0	0.0	0.0	19	
CW_Inv08	Cornwall - Inverter Cluster 08	524047	4994553	2.5	83	65.8	0	0.0	-3.0	0.0	0.3	0.0	0.0	0.0	20	
CW_Inv09	Cornwall - Inverter Cluster 09	524115	4994452	2.5	83	64.1	0	0.0	-1.9	3.4	0.2	0.0	0.0	0.0	18	
CW_Inv10	Cornwall - Inverter Cluster 10	524166	4994371	2.5	83	62.7	0	0.0	-2.6	0.0	0.2	0.0	0.0	0.0	23	
CW_Sub	Cornwall - Transformer Substation	524396	4994373	3.0	89	54.9	0	0.0	0.2	6.1	0.6	0.0	0.0	0.0	27	
CW_Trans01	Cornwall - Inverter Transformer 01	524314	4994439	2.0	75	59.2	0	0.0	1.1	7.3	0.9	0.0	0.0	0.0	6	
CW_Trans02	Cornwall - Inverter Transformer 02	524245	4994548	2.0	75	62.5	0	0.0	1.4	9.8	1.2	0.0	0.0	0.0	0	
CW_Trans03	Cornwall - Inverter Transformer 03	524189	4994641	2.0	75	64.6	0	0.0	1.4	9.3	1.4	0.0	0.0	0.0	--	
CW_Trans04	Cornwall - Inverter Transformer 04	524116	4994763	2.0	75	66.8	0	0.0	0.1	0.0	1.8	0.0	0.0	0.0	6	
CW_Trans05	Cornwall - Inverter Transformer 05	524047	4994873	2.0	75	68.4	0	0.0	0.1	0.0	2.1	0.0	0.0	0.0	4	
CW_Trans06	Cornwall - Inverter Transformer 06	523914	4994780	2.0	75	68.8	0	0.0	0.5	1.6	2.1	0.0	0.0	0.0	2	
CW_Trans07	Cornwall - Inverter Transformer 07	523982	4994672	2.0	75	67.4	0	0.0	0.1	0.0	1.9	0.0	0.0	0.0	5	
CW_Trans08	Cornwall - Inverter Transformer 08	524052	4994553	2.0	75	65.7	0	0.0	0.1	0.0	1.6	0.0	0.0	0.0	7	
CW_Trans09	Cornwall - Inverter Transformer 09	524120	4994452	2.0	75	64.0	0	0.0	0.4	1.5	1.4	0.0	0.0	0.0	8	
CW_Trans10	Cornwall - Inverter Transformer 10	524171	4994371	2.0	75	62.6	0	0.0	0.2	0.0	1.2	0.0	0.0	0.0	11	
NS-01	Inverter House MV1	524587	4994981	1.5	88	67.3	0	0.0	1.0	0.0	2.2	0.0	0.0	0.0	18	
NS-02	Inverter House MV2	524595	4995076	1.5	91	68.5	0	0.0	1.1	0.0	2.4	0.0	0.0	0.0	19	
NS-03	Inverter House MV3	524627	4994781	1.5	91	64.3	0	0.0	0.9	0.0	1.7	0.0	0.0	0.0	24	
NS-04	Inverter House MV4	524638	4994914	1.5	91	66.5	0	0.0	1.0	0.0	2.0	0.0	0.0	0.0	22	
NS-05	Inverter House MV5	524652	4995066	1.5	91	68.5	0	0.0	1.1	0.0	2.4	0.0	0.0	0.0	19	
NS-06	Inverter House MV6	524754	4995247	1.5	91	70.5	0	0.0	1.2	0.0	2.8	0.0	0.0	0.0	17	
NS-07	Inverter House MV7	524896	4994772	1.5	91	66.1	0	0.0	0.9	0.0	2.0	0.0	0.0	0.0	22	
NS-08	Inverter House MV8	524908	4994905	1.5	91	67.7	0	0.0	1.0	0.0	2.2	0.0	0.0	0.0	20	
NS-09	Inverter House MV9	524921	4995057	1.5	91	69.3	0	0.0	1.1	0.0	2.6	0.0	0.0	0.0	18	
NS-10	Inverter House MV10	524968	4994933	1.5	91	68.4	0	0.0	1.1	0.0	2.4	0.0	0.0	0.0	20	
NS-11	Transformer 1 MVA (MV1)	524592	4994980	1.5	69	67.3	0	0.0	1.3	0.0	1.8	0.0	0.0	0.0	--	
NS-12	Transformer 1 MVA (MV2)	524600	4995075	1.5	69	68.5	0	0.0	1.3	0.0	2.0	0.0	0.0	0.0	--	
NS-13	Transformer 1 MVA (MV3)	524622	4994782	1.5	69	64.3	0	0.0	1.2	0.0	1.4	0.0	0.0	0.0	2	
NS-14	Transformer 1 MVA (MV4)	524634	4994914	1.5	69	66.5	0	0.0	1.2	0.0	1.7	0.0	0.0	0.0	--	
NS-15	Transformer 1 MVA (MV5)	524647	4995067	1.5	69	68.5	0	0.0	1.3	0.0	2.0	0.0	0.0	0.0	--	
NS-16	Transformer 1 MVA (MV6)	524750	4995247	1.5	69	70.5	0	0.0	1.4	0.0	2.4	0.0	0.0	0.0	--	
NS-17	Transformer 1 MVA (MV7)	524901	4994772	1.5	69	66.1	0	0.0	1.2	0.0	1.6	0.0	0.0	0.0	0	
NS-18	Transformer 1 MVA (MV8)	524913	4994905	1.5	69	67.7	0	0.0	1.3	0.0	1.9	0.0	0.0	0.0	--	
NS-19	Transformer 1 MVA (MV9)	524926	4995056	1.5	69	69.3	0	0.0	1.3	0.0	2.2	0.0	0.0	0.0	--	
NS-20	Transformer 1 MVA (MV10)	524963	4994933	1.5	69	68.3	0	0.0	1.3	0.0	2.0	0.0	0.0	0.0	--	
NS-21	Transformer 10 MVA	525013	4994843	2.0	88	67.9	0	0.0	0.2	0.0	1.9	0.0	0.0	0.0	18	

R07	Residential Dwelling		524614	4994321	4.5										
SrcID	SrcName	Y	Z	Lx	Adiv	KD	Dc	Agnd	Abar	Aatm	Afol	Ahaus	Cmet	Ref1	Lr
CW_Inv01	Cornwall - Inverter Cluster 01	524310	4994439	2.5	83	61.3	0	0.0	-2.3	0.0	0.2	0.0	0.0	0.0	24
CW_Inv02	Cornwall - Inverter Cluster 02	524240	4994548	2.5	83	63.8	0	0.0	-2.5	3.6	0.2	0.0	0.0	0.0	18
CW_Inv03	Cornwall - Inverter Cluster 03	524184	4994642	2.5	83	65.6	0	0.0	-2.7	3.7	0.3	0.0	0.0	0.0	17
CW_Inv04	Cornwall - Inverter Cluster 04	524111	4994764	2.5	83	67.5	0	0.0	-3.2	0.0	0.3	0.0	0.0	0.0	19
CW_Inv05	Cornwall - Inverter Cluster 05	524042	4994873	2.5	83	69.0	0	0.0	-3.4	0.0	0.4	0.0	0.0	0.0	17
CW_Inv06	Cornwall - Inverter Cluster 06	523909	4994780	2.5	83	69.5	0	0.0	-3.4	0.0	0.4	0.0	0.0	0.0	17
CW_Inv07	Cornwall - Inverter Cluster 07	523977	4994673	2.5	83	68.2	0	0.0	-3.3	0.0	0.4	0.0	0.0	0.0	18
CW_Inv08	Cornwall - Inverter Cluster 08	524047	4994553	2.5	83	66.7	0	0.0	-3.2	0.0	0.3	0.0	0.0	0.0	20
CW_Inv09	Cornwall - Inverter Cluster 09	524115	4994452	2.5	83	65.2	0	0.0	-3.0	0.0	0.3	0.0	0.0	0.0	21
CW_Inv10	Cornwall - Inverter Cluster 10	524166	4994371	2.5	83	64.1	0	0.0	-2.8	0.0	0.2	0.0	0.0	0.0	22
CW_Sub	Cornwall - Transformer Substation	524396	4994373	3.0	89	58.0	0	0.0	0.3	5.8	0.8	0.0	0.0	0.0	24
CW_Trans01	Cornwall - Inverter Transformer 01	524314	4994439	2.0	75	61.2	0	0.0	1.1	7.9	1.0	0.0	0.0	0.0	4
CW_Trans02	Cornwall - Inverter Transformer 02	524245	4994548	2.0	75	63.7	0	0.0	1.4	9.7	1.3	0.0	0.0	0.0	--
CW_Trans03	Cornwall - Inverter Transformer 03	524189	4994641	2.0	75	65.5	0	0.0	1.4	9.4	1.6	0.0	0.0	0.0	--
CW_Trans04	Cornwall - Inverter Transformer 04	524116	4994763	2.0	75	67.5	0	0.0	0.1	0.0	1.9	0.0	0.0	0.0	5
CW_Trans05	Cornwall - Inverter Transformer 05	524047	4994873	2.0	75	69.0	0	0.0	0.1	0.0	2.2	0.0	0.0	0.0	4
CW_Trans06	Cornwall - Inverter Transformer 06	523914	4994780	2.0	75	69.5	0	0.0	0.1	0.0	2.3	0.0	0.0	0.0	3
CW_Trans07	Cornwall - Inverter Transformer 07	523982	4994672	2.0	75	68.2	0	0.0	0.1	0.0	2.0	0.0	0.0	0.0	4
CW_Trans08	Cornwall - Inverter Transformer 08	524052	4994553	2.0	75	66.7	0	0.0	0.1	0.0	1.7	0.0	0.0	0.0	6
CW_Trans09	Cornwall - Inverter Transformer 09	524120	4994452	2.0	75	65.2	0	0.0	0.1	0.0	1.5	0.0	0.0	0.0	8
CW_Trans10	Cornwall - Inverter Transformer 10	524171	4994371	2.0	75	64.0	0	0.0	0.1	0.0	1.4	0.0	0.0	0.0	9
NS-01	Inverter House MV1	524587	4994981	1.5	88	67.4	0	0.0	1.0	0.0	2.2	0.0	0.0	0.0	18
NS-02	Inverter House MV2	524595	4995076	1.5	91	68.6	0	0.0	1.1	0.0	2.4	0.0	0.0	0.0	19
NS-03	Inverter House MV3	524627	4994781	1.5	91	64.3	0	0.0	0.9	0.0	1.7	0.0	0.0	0.0	25
NS-04	Inverter House MV4	524638	4994914	1.5	91	66.5	0	0.0	1.0	0.0	2.0	0.0	0.0	0.0	22
NS-05	Inverter House MV5	524652	4995066	1.5	91	68.5	0	0.0	1.1	0.0	2.4	0.0	0.0	0.0	19
NS-06	Inverter House MV6	524754	4995247	1.5	91	70.4	0	0.0	1.2	0.0	2.8	0.0	0.0	0.0	17
NS-07	Inverter House MV7	524896	4994772	1.5	91	65.5	0	0.0	0.9	0.0	1.9	0.0	0.0	0.0	23
NS-08	Inverter House MV8	524908	4994905	1.5	91	67.3	0	0.0	1.0	0.0	2.2	0.0	0.0	0.0	21
NS-09	Inverter House MV9	524921	4995057	1.5	91	69.0	0	0.0	1.1	0.0	2.5	0.0	0.0	0.0	19
NS-10	Inverter House MV10	524968	4994933	1.5	91	68.0	0	0.0	1.0	0.0	2.3	0.0	0.0	0.0	20
NS-11	Transformer 1 MVA (MV1)	524592	4994980	1.5	69	67.4	0	0.0	1.3	0.0	1.8	0.0	0.0	0.0	--
NS-12	Transformer 1 MVA (MV2)	524600	4995075	1.5	69	68.6	0	0.0	1.3	0.0	2.0	0.0	0.0	0.0	--
NS-13	Transformer 1 MVA (MV3)	524622	4994782	1.5	69	64.3	0	0.0	1.2	0.0	1.4	0.0	0.0	0.0	2
NS-14	Transformer 1 MVA (MV4)	524634	4994914	1.5	69	66.5	0	0.0	1.2	0.0	1.7	0.0	0.0	0.0	--
NS-15	Transformer 1 MVA (MV5)	524647	4995067	1.5	69	68.5	0	0.0	1.3	0.0	2.0	0.0	0.0	0.0	--
NS-16	Transformer 1 MVA (MV6)	524750	4995247	1.5	69	70.4	0	0.0	1.4	0.0	2.4	0.0	0.0	0.0	--
NS-17	Transformer 1 MVA (MV7)	524901	4994772	1.5	69	65.6	0	0.0	1.2	0.0	1.5	0.0	0.0	0.0	1
NS-18	Transformer 1 MVA (MV8)	524913	4994905	1.5	69	67.3	0	0.0	1.3	0.0	1.8	0.0	0.0	0.0	--
NS-19	Transformer 1 MVA (MV9)	524926	4995056	1.5	69	69.1	0	0.0	1.3	0.0	2.1	0.0	0.0	0.0	--
NS-20	Transformer 1 MVA (MV10)	524963	4994933	1.5	69	68.0	0	0.0	1.3	0.0	1.9	0.0	0.0	0.0	--
NS-21	Transformer 10 MVA	525013	4994843	2.0	88	67.4	0	0.0	0.2	0.0	1.8	0.0	0.0	0.0	19

R08	Vacant Lot	524671	4994353	4.5												
Src ID	Src Name		Y	Z	Lx	Adiv	KD	Dc	Agnd	Abar	Aatm	Afol	Ahaus	Cmet	Ref1	Lr
CW_Inv01	Cornwall - Inverter Cluster 01	524310	4994439	2.5	83	62.4	0	0.0	-2.3	1.6	0.2	0.0	0.0	0.0	0.0	21
CW_Inv02	Cornwall - Inverter Cluster 02	524240	4994548	2.5	83	64.5	0	0.0	-2.5	3.2	0.3	0.0	0.0	0.0	0.0	18
CW_Inv03	Cornwall - Inverter Cluster 03	524184	4994642	2.5	83	66.1	0	0.0	-2.7	3.4	0.3	0.0	0.0	0.0	0.0	16
CW_Inv04	Cornwall - Inverter Cluster 04	524111	4994764	2.5	83	67.8	0	0.0	-3.3	0.0	0.4	0.0	0.0	0.0	0.0	18
CW_Inv05	Cornwall - Inverter Cluster 05	524042	4994873	2.5	83	69.2	0	0.0	-3.4	0.0	0.4	0.0	0.0	0.0	0.0	17
CW_Inv06	Cornwall - Inverter Cluster 06	523909	4994780	2.5	83	69.8	0	0.0	-3.5	0.0	0.4	0.0	0.0	0.0	0.0	17
CW_Inv07	Cornwall - Inverter Cluster 07	523977	4994673	2.5	83	68.7	0	0.0	-3.2	1.1	0.4	0.0	0.0	0.0	0.0	16
CW_Inv08	Cornwall - Inverter Cluster 08	524047	4994553	2.5	83	67.3	0	0.0	-3.2	0.0	0.3	0.0	0.0	0.0	0.0	19
CW_Inv09	Cornwall - Inverter Cluster 09	524115	4994452	2.5	83	66.0	0	0.0	-3.1	0.0	0.3	0.0	0.0	0.0	0.0	20
CW_Inv10	Cornwall - Inverter Cluster 10	524166	4994371	2.5	83	65.1	0	0.0	-3.0	0.0	0.3	0.0	0.0	0.0	0.0	21
CW_Sub	Cornwall - Transformer Substation	524396	4994373	3.0	89	59.8	0	0.0	0.1	5.6	0.9	0.0	0.0	0.0	0.0	22
CW_Trans01	Cornwall - Inverter Transformer 01	524314	4994439	2.0	75	62.3	0	0.0	1.2	8.6	1.2	0.0	0.0	0.0	0.0	2
CW_Trans02	Cornwall - Inverter Transformer 02	524245	4994548	2.0	75	64.4	0	0.0	1.4	9.7	1.4	0.0	0.0	0.0	0.0	--
CW_Trans03	Cornwall - Inverter Transformer 03	524189	4994641	2.0	75	66.0	0	0.0	1.4	9.4	1.6	0.0	0.0	0.0	0.0	--
CW_Trans04	Cornwall - Inverter Transformer 04	524116	4994763	2.0	75	67.8	0	0.0	0.1	0.0	1.9	0.0	0.0	0.0	0.0	5
CW_Trans05	Cornwall - Inverter Transformer 05	524047	4994873	2.0	75	69.2	0	0.0	0.1	0.0	2.2	0.0	0.0	0.0	0.0	3
CW_Trans06	Cornwall - Inverter Transformer 06	523914	4994780	2.0	75	69.8	0	0.0	0.2	0.0	2.3	0.0	0.0	0.0	0.0	3
CW_Trans07	Cornwall - Inverter Transformer 07	523982	4994672	2.0	75	68.6	0	0.0	0.3	0.9	2.1	0.0	0.0	0.0	0.0	3
CW_Trans08	Cornwall - Inverter Transformer 08	524052	4994553	2.0	75	67.3	0	0.0	0.1	0.0	1.8	0.0	0.0	0.0	0.0	6
CW_Trans09	Cornwall - Inverter Transformer 09	524120	4994452	2.0	75	66.0	0	0.0	0.1	0.0	1.6	0.0	0.0	0.0	0.0	7
CW_Trans10	Cornwall - Inverter Transformer 10	524171	4994371	2.0	75	65.0	0	0.0	0.1	0.0	1.5	0.0	0.0	0.0	0.0	8
NS-01	Inverter House MV1	524587	4994981	1.5	88	67.0	0	0.0	1.0	0.0	2.1	0.0	0.0	0.0	0.0	18
NS-02	Inverter House MV2	524595	4995076	1.5	91	68.2	0	0.0	1.1	0.0	2.3	0.0	0.0	0.0	0.0	20
NS-03	Inverter House MV3	524627	4994781	1.5	91	63.7	0	0.0	0.8	0.0	1.6	0.0	0.0	0.0	0.0	25
NS-04	Inverter House MV4	524638	4994914	1.5	91	66.0	0	0.0	0.9	0.0	1.9	0.0	0.0	0.0	0.0	22
NS-05	Inverter House MV5	524652	4995066	1.5	91	68.1	0	0.0	1.1	0.0	2.3	0.0	0.0	0.0	0.0	20
NS-06	Inverter House MV6	524754	4995247	1.5	91	70.1	0	0.0	1.2	0.0	2.7	0.0	0.0	0.0	0.0	17
NS-07	Inverter House MV7	524896	4994772	1.5	91	64.5	0	0.0	0.9	0.0	1.7	0.0	0.0	0.0	0.0	24
NS-08	Inverter House MV8	524908	4994905	1.5	91	66.6	0	0.0	1.0	0.0	2.0	0.0	0.0	0.0	0.0	22
NS-09	Inverter House MV9	524921	4995057	1.5	91	68.5	0	0.0	1.1	0.0	2.4	0.0	0.0	0.0	0.0	19
NS-10	Inverter House MV10	524968	4994933	1.5	91	67.3	0	0.0	1.0	0.0	2.2	0.0	0.0	0.0	0.0	21
NS-11	Transformer 1 MVA (MV1)	524592	4994980	1.5	69	67.0	0	0.0	1.3	0.0	1.8	0.0	0.0	0.0	0.0	--
NS-12	Transformer 1 MVA (MV2)	524600	4995075	1.5	69	68.2	0	0.0	1.3	0.0	2.0	0.0	0.0	0.0	0.0	--
NS-13	Transformer 1 MVA (MV3)	524622	4994782	1.5	69	63.7	0	0.0	1.2	0.0	1.3	0.0	0.0	0.0	0.0	3
NS-14	Transformer 1 MVA (MV4)	524634	4994914	1.5	69	66.0	0	0.0	1.2	0.0	1.6	0.0	0.0	0.0	0.0	0
NS-15	Transformer 1 MVA (MV5)	524647	4995067	1.5	69	68.1	0	0.0	1.3	0.0	1.9	0.0	0.0	0.0	0.0	--
NS-16	Transformer 1 MVA (MV6)	524750	4995247	1.5	69	70.1	0	0.0	1.4	0.0	2.3	0.0	0.0	0.0	0.0	--
NS-17	Transformer 1 MVA (MV7)	524901	4994772	1.5	69	64.6	0	0.0	1.2	0.0	1.4	0.0	0.0	0.0	0.0	2
NS-18	Transformer 1 MVA (MV8)	524913	4994905	1.5	69	66.6	0	0.0	1.2	0.0	1.7	0.0	0.0	0.0	0.0	--
NS-19	Transformer 1 MVA (MV9)	524926	4995056	1.5	69	68.5	0	0.0	1.3	0.0	2.0	0.0	0.0	0.0	0.0	--
NS-20	Transformer 1 MVA (MV10)	524963	4994933	1.5	69	67.3	0	0.0	1.3	0.0	1.8	0.0	0.0	0.0	0.0	--
NS-21	Transformer 10 MVA	525013	4994943	2.0	88	66.5	0	0.0	0.2	0.0	1.7	0.0	0.0	0.0	0.0	20

R09 Residential Dwelling		524728	4994445	4.5												
Src ID	Src Name	Y	Z	Lx	Adiv	KD	Dc	Agnd	Abar	Aatm	Afol	Ahaus	Cmet	Refl	Lr	
CW_Inv01	Cornwall - Inverter Cluster 01	524310	4994439	2.5	83	63.4	0	0.0	-2.5	2.4	0.2	0.0	0.0	0.0	20	
CW_Inv02	Cornwall - Inverter Cluster 02	524240	4994548	2.5	83	65.0	0	0.0	-2.6	2.8	0.3	0.0	0.0	0.0	18	
CW_Inv03	Cornwall - Inverter Cluster 03	524184	4994642	2.5	83	66.2	0	0.0	-2.6	2.8	0.3	0.0	0.0	0.0	17	
CW_Inv04	Cornwall - Inverter Cluster 04	524111	4994764	2.5	83	67.8	0	0.0	-3.3	0.0	0.3	0.0	0.0	0.0	19	
CW_Inv05	Cornwall - Inverter Cluster 05	524042	4994873	2.5	83	69.2	0	0.0	-3.4	0.0	0.4	0.0	0.0	0.0	17	
CW_Inv06	Cornwall - Inverter Cluster 06	523909	4994780	2.5	83	69.9	0	0.0	-3.5	0.0	0.4	0.0	0.0	0.0	17	
CW_Inv07	Cornwall - Inverter Cluster 07	523977	4994673	2.5	83	68.9	0	0.0	-3.4	0.0	0.4	0.0	0.0	0.0	18	
CW_Inv08	Cornwall - Inverter Cluster 08	524047	4994553	2.5	83	67.8	0	0.0	-3.3	0.0	0.4	0.0	0.0	0.0	19	
CW_Inv09	Cornwall - Inverter Cluster 09	524115	4994452	2.5	83	66.7	0	0.0	-3.2	0.0	0.3	0.0	0.0	0.0	20	
CW_Inv10	Cornwall - Inverter Cluster 10	524166	4994371	2.5	83	66.1	0	0.0	-3.1	0.0	0.3	0.0	0.0	0.0	20	
CW_Sub	Cornwall - Transformer Substation	524396	4994373	3.0	89	61.6	0	0.0	-0.1	4.9	1.1	0.0	0.0	0.0	21	
CW_Trans01	Cornwall - Inverter Transformer 01	524314	4994439	2.0	75	63.3	0	0.0	1.3	9.4	1.3	0.0	0.0	0.0	--	
CW_Trans02	Cornwall - Inverter Transformer 02	524245	4994548	2.0	75	64.9	0	0.0	1.4	9.7	1.5	0.0	0.0	0.0	--	
CW_Trans03	Cornwall - Inverter Transformer 03	524189	4994641	2.0	75	66.2	0	0.0	1.4	9.5	1.7	0.0	0.0	0.0	--	
CW_Trans04	Cornwall - Inverter Transformer 04	524116	4994763	2.0	75	67.8	0	0.0	0.1	0.0	1.9	0.0	0.0	0.0	5	
CW_Trans05	Cornwall - Inverter Transformer 05	524047	4994873	2.0	75	69.1	0	0.0	0.1	0.0	2.2	0.0	0.0	0.0	3	
CW_Trans06	Cornwall - Inverter Transformer 06	523914	4994780	2.0	75	69.9	0	0.0	0.2	0.0	2.4	0.0	0.0	0.0	2	
CW_Trans07	Cornwall - Inverter Transformer 07	523982	4994672	2.0	75	68.8	0	0.0	0.1	0.0	2.1	0.0	0.0	0.0	4	
CW_Trans08	Cornwall - Inverter Transformer 08	524052	4994553	2.0	75	67.7	0	0.0	0.1	0.0	1.9	0.0	0.0	0.0	5	
CW_Trans09	Cornwall - Inverter Transformer 09	524120	4994452	2.0	75	66.7	0	0.0	0.1	0.0	1.7	0.0	0.0	0.0	6	
CW_Trans10	Cornwall - Inverter Transformer 10	524171	4994371	2.0	75	66.0	0	0.0	0.1	0.0	1.6	0.0	0.0	0.0	7	
NS-01	Inverter House MV1	524587	4994981	1.5	88	65.9	0	0.0	0.9	0.0	1.9	0.0	0.0	0.0	20	
NS-02	Inverter House MV2	524595	4995076	1.5	91	67.2	0	0.0	1.0	0.0	2.1	0.0	0.0	0.0	21	
NS-03	Inverter House MV3	524627	4994781	1.5	91	61.9	0	0.0	0.8	0.0	1.4	0.0	0.0	0.0	27	
NS-04	Inverter House MV4	524638	4994914	1.5	91	64.6	0	0.0	0.9	0.0	1.7	0.0	0.0	0.0	24	
NS-05	Inverter House MV5	524652	4995066	1.5	91	66.9	0	0.0	1.0	0.0	2.1	0.0	0.0	0.0	21	
NS-06	Inverter House MV6	524754	4995247	1.5	91	69.1	0	0.0	1.1	0.0	2.5	0.0	0.0	0.0	19	
NS-07	Inverter House MV7	524896	4994772	1.5	91	62.3	0	0.0	0.8	0.0	1.4	0.0	0.0	0.0	27	
NS-08	Inverter House MV8	524908	4994905	1.5	91	64.9	0	0.0	0.9	0.0	1.8	0.0	0.0	0.0	24	
NS-09	Inverter House MV9	524921	4995057	1.5	91	67.1	0	0.0	1.0	0.0	2.1	0.0	0.0	0.0	21	
NS-10	Inverter House MV10	524968	4994933	1.5	91	65.7	0	0.0	0.9	0.0	1.9	0.0	0.0	0.0	23	
NS-11	Transformer 1 MVA (MV1)	524592	4994980	1.5	69	65.8	0	0.0	1.2	0.0	1.6	0.0	0.0	0.0	0	
NS-12	Transformer 1 MVA (MV2)	524600	4995075	1.5	69	67.2	0	0.0	1.3	0.0	1.8	0.0	0.0	0.0	--	
NS-13	Transformer 1 MVA (MV3)	524622	4994782	1.5	69	62.0	0	0.0	1.2	0.0	1.1	0.0	0.0	0.0	5	
NS-14	Transformer 1 MVA (MV4)	524634	4994914	1.5	69	64.6	0	0.0	1.2	0.0	1.4	0.0	0.0	0.0	2	
NS-15	Transformer 1 MVA (MV5)	524647	4995067	1.5	69	66.9	0	0.0	1.3	0.0	1.8	0.0	0.0	0.0	--	
NS-16	Transformer 1 MVA (MV6)	524750	4995247	1.5	69	69.1	0	0.0	1.3	0.0	2.1	0.0	0.0	0.0	--	
NS-17	Transformer 1 MVA (MV7)	524901	4994772	1.5	69	62.4	0	0.0	1.2	0.0	1.1	0.0	0.0	0.0	4	
NS-18	Transformer 1 MVA (MV8)	524913	4994905	1.5	69	64.9	0	0.0	1.2	0.0	1.4	0.0	0.0	0.0	1	
NS-19	Transformer 1 MVA (MV9)	524926	4995056	1.5	69	67.2	0	0.0	1.3	0.0	1.8	0.0	0.0	0.0	--	
NS-20	Transformer 1 MVA (MV10)	524963	4994933	1.5	69	65.7	0	0.0	1.2	0.0	1.6	0.0	0.0	0.0	1	
NS-21	Transformer 10 MVA	525013	4994843	2.0	88	64.8	0	0.0	0.2	0.0	1.4	0.0	0.0	0.0	22	

R10 Residential Dwelling		524780	4994389	4.5												
Src ID	Src Name	Y	Z	Lx	Adiv	KD	Dc	Agnd	Abar	Aatm	Afol	Ahaus	Cmet	Refl	Lr	
CW_Inv01	Cornwall - Inverter Cluster 01	524310	4994439	2.5	83	64.5	0	0.0	-2.6	2.0	0.3	0.0	0.0	0.0	19	
CW_Inv02	Cornwall - Inverter Cluster 02	524240	4994548	2.5	83	66.0	0	0.0	-2.6	2.8	0.3	0.0	0.0	0.0	17	
CW_Inv03	Cornwall - Inverter Cluster 03	524184	4994642	2.5	83	67.2	0	0.0	-2.7	2.9	0.3	0.0	0.0	0.0	16	
CW_Inv04	Cornwall - Inverter Cluster 04	524111	4994764	2.5	83	68.7	0	0.0	-3.4	0.0	0.4	0.0	0.0	0.0	18	
CW_Inv05	Cornwall - Inverter Cluster 05	524042	4994873	2.5	83	69.9	0	0.0	-3.5	0.0	0.4	0.0	0.0	0.0	16	
CW_Inv06	Cornwall - Inverter Cluster 06	523909	4994780	2.5	83	70.6	0	0.0	-3.5	0.0	0.5	0.0	0.0	0.0	16	
CW_Inv07	Cornwall - Inverter Cluster 07	523977	4994673	2.5	83	69.6	0	0.0	-3.5	0.0	0.4	0.0	0.0	0.0	17	
CW_Inv08	Cornwall - Inverter Cluster 08	524047	4994553	2.5	83	68.5	0	0.0	-3.3	0.0	0.4	0.0	0.0	0.0	18	
CW_Inv09	Cornwall - Inverter Cluster 09	524115	4994452	2.5	83	67.5	0	0.0	-3.2	0.0	0.3	0.0	0.0	0.0	19	
CW_Inv10	Cornwall - Inverter Cluster 10	524166	4994371	2.5	83	66.8	0	0.0	-3.2	0.0	0.3	0.0	0.0	0.0	19	
CW_Sub	Cornwall - Transformer Substation	524396	4994373	3.0	89	62.7	0	0.0	-0.1	5.2	1.2	0.0	0.0	0.0	20	
CW_Trans01	Cornwall - Inverter Transformer 01	524314	4994439	2.0	75	64.4	0	0.0	1.2	9.0	1.4	0.0	0.0	0.0	--	
CW_Trans02	Cornwall - Inverter Transformer 02	524245	4994548	2.0	75	65.9	0	0.0	1.4	9.5	1.6	0.0	0.0	0.0	--	
CW_Trans03	Cornwall - Inverter Transformer 03	524189	4994641	2.0	75	67.2	0	0.0	1.4	9.3	1.8	0.0	0.0	0.0	--	
CW_Trans04	Cornwall - Inverter Transformer 04	524116	4994763	2.0	75	68.6	0	0.0	0.1	0.0	2.1	0.0	0.0	0.0	4	
CW_Trans05	Cornwall - Inverter Transformer 05	524047	4994873	2.0	75	69.9	0	0.0	0.2	0.0	2.4	0.0	0.0	0.0	2	
CW_Trans06	Cornwall - Inverter Transformer 06	523914	4994780	2.0	75	70.6	0	0.0	0.2	0.0	2.5	0.0	0.0	0.0	2	
CW_Trans07	Cornwall - Inverter Transformer 07	523982	4994672	2.0	75	69.6	0	0.0	0.1	0.0	2.3	0.0	0.0	0.0	3	
CW_Trans08	Cornwall - Inverter Transformer 08	524052	4994553	2.0	75	68.5	0	0.0	0.1	0.0	2.1	0.0	0.0	0.0	4	
CW_Trans09	Cornwall - Inverter Transformer 09	524120	4994452	2.0	75	67.4	0	0.0	0.1	0.0	1.9	0.0	0.0	0.0	5	
CW_Trans10	Cornwall - Inverter Transformer 10	524171	4994371	2.0	75	66.7	0	0.0	0.1	0.0	1.7	0.0	0.0	0.0	6	
NS-01	Inverter House MV1	524587	4994981	1.5	88	66.9	0	0.0	1.0	0.0	2.1	0.0	0.0	0.0	18	
NS-02	Inverter House MV2	524595	4995076	1.5	91	68.0	0	0.0	1.1	0.0	2.3	0.0	0.0	0.0	20	
NS-03	Inverter House MV3	524627	4994781	1.5	91	63.5	0	0.0	0.8	0.0	1.6	0.0	0.0	0.0	25	
NS-04	Inverter House MV4	524638	4994914	1.5	91	65.7	0	0.0	0.9	0.0	1.9	0.0	0.0	0.0	23	
NS-05	Inverter House MV5	524652	4995066	1.5	91	67.8	0	0.0	1.0	0.0	2.2	0.0	0.0	0.0	20	
NS-06	Inverter House MV6	524754	4995247	1.5	91	69.7	0	0.0	1.2	0.0	2.6	0.0	0.0	0.0	18	
NS-07	Inverter House MV7	524896	4994772	1.5	91	63.1	0	0.0	0.8	0.0	1.5	0.0	0.0	0.0	26	
NS-08	Inverter House MV8	524908	4994905	1.5	91	65.5	0	0.0	0.9	0.0	1.9	0.0	0.0	0.0	23	
NS-09	Inverter House MV9	524921	4995057	1.5	91	67.7	0	0.0	1.0	0.0	2.2	0.0	0.0	0.0	20	
NS-10	Inverter House MV10	524968	4994933	1.5	91	66.2	0	0.0	0.9	0.0	2.0	0.0	0.0	0.0	22	
NS-11	Transformer 1 MVA (MV1)	524592	4994980	1.5	69	66.9	0	0.0	1.3	0.0	1.7	0.0	0.0	0.0	--	
NS-12	Transformer 1 MVA (MV2)	524600	4995075	1.5	69	68.0	0	0.0	1.3	0.0	1.9	0.0	0.0	0.0	--	
NS-13	Transformer 1 MVA (MV3)	524622	4994782	1.5	69	63.5	0	0.0	1.2	0.0	1.3	0.0	0.0	0.0	3	
NS-14	Transformer 1 MVA (MV4)	524634	4994914	1.5	69	65.7	0	0.0	1.2	0.0	1.6	0.0	0.0	0.0	0	
NS-15	Transformer 1 MVA (MV5)	524647	4995067	1.5	69	67.8	0	0.0	1.3	0.0	1.9	0.0	0.0	0.0	--	
NS-16	Transformer 1 MVA (MV6)	524750	4995247	1.5	69	69.7	0	0.0	1.4	0.0	2.3	0.0	0.0	0.0	--	
NS-17	Transformer 1 MVA (MV7)	524901	4994772	1.5	69	63.1	0	0.0	1.2	0.0	1.2	0.0	0.0	0.0	4	
NS-18	Transformer 1 MVA (MV8)	524913	4994905	1.5	69	65.5	0	0.0	1.2	0.0	1.5	0.0	0.0	0.0	1	
NS-19	Transformer 1 MVA (MV9)	524926	4995056	1.5	69	67.7	0	0.0	1.3	0.0	1.9	0.0	0.0	0.0	--	
NS-20	Transformer 1 MVA (MV10)	524963	4994933	1.5	69	66.2	0	0.0	1.2	0.0	1.6	0.0	0.0	0.0	--	
NS-21	Transformer 10 MVA	525013	4994843	2.0	88	65.2	0	0.0	0.2	0.0	15.0	0.0	0.0	0.0	21	

APPENDIX I

Sample Calculation Results - Octave Band Format

In the following tables of calculation results, the column headings for the various sound attenuation mechanisms follow the terminology of ISO Standard 9613-2. L_x is the A-weighted, one-hour energy-equivalent (or logarithmic-mean impulse) source sound power level, which includes the effects of any source-abatement measures included in the model, and any time-averaging effects for intermittent sources. L_r is the A-weighted, one-hour energy-equivalent (or logarithmic-mean impulse) sound level at the point of reception. The results are presented in terms of full octave band sound levels, at the most impacted off-site point of reception.



R17 Residential Dwelling		524993		4994604		4.5															
Src ID	Src Name	Band	X	Y	Z	Lx	Adiv	K0	Dc	Agnd	Abar	Aatm	Afol	Ahaus	Cmet	Refl	Lr	Band			
CW_Inv01	Cornwall - Inverter Cluster 01	32	524309	4994439	2.5	0	67.9	0	0.0	-5.1	2.5	0.0	0.0	0.0	0.0	0.0	--	32			
CW_Inv01	Cornwall - Inverter Cluster 01	63	524309	4994439	2.5	81	67.9	0	0.0	-5.1	3.2	0.1	0.0	0.0	0.0	0.0	15	63			
CW_Inv01	Cornwall - Inverter Cluster 01	125	524309	4994439	2.5	76	67.9	0	0.0	3.7	0.8	0.3	0.0	0.0	0.0	0.0	3	125			
CW_Inv01	Cornwall - Inverter Cluster 01	250	524309	4994439	2.5	76	67.9	0	0.0	2.9	2.1	0.7	0.0	0.0	0.0	0.0	3	250			
CW_Inv01	Cornwall - Inverter Cluster 01	500	524309	4994439	2.5	71	67.9	0	0.0	-1.0	5.4	1.4	0.0	0.0	0.0	0.0	--	500			
CW_Inv01	Cornwall - Inverter Cluster 01	1000	524309	4994439	2.5	65	67.9	0	0.0	-1.5	6.4	2.6	0.0	0.0	0.0	0.0	--	1000			
CW_Inv01	Cornwall - Inverter Cluster 01	2000	524309	4994439	2.5	58	67.9	0	0.0	-1.5	7.8	6.8	0.0	0.0	0.0	0.0	--	2000			
CW_Inv01	Cornwall - Inverter Cluster 01	4000	524309	4994439	2.5	49	67.9	0	0.0	-1.5	9.7	23.0	0.0	0.0	0.0	0.0	--	4000			
CW_Inv01	Cornwall - Inverter Cluster 01	8000	524309	4994439	2.5	54	67.9	0	0.0	-1.5	12.0	82.2	0.0	0.0	0.0	0.0	--	8000			
CW_Inv02	Cornwall - Inverter Cluster 02	32	524240	4994548	2.5	0	68.6	0	0.0	-5.2	1.8	0.0	0.0	0.0	0.0	0.0	--	32			
CW_Inv02	Cornwall - Inverter Cluster 02	63	524240	4994548	2.5	81	68.6	0	0.0	-5.2	2.3	0.1	0.0	0.0	0.0	0.0	15	63			
CW_Inv02	Cornwall - Inverter Cluster 02	125	524240	4994548	2.5	76	68.6	0	0.0	3.8	0.2	0.3	0.0	0.0	0.0	0.0	3	125			
CW_Inv02	Cornwall - Inverter Cluster 02	250	524240	4994548	2.5	76	68.6	0	0.0	2.9	1.5	0.8	0.0	0.0	0.0	0.0	3	250			
CW_Inv02	Cornwall - Inverter Cluster 02	500	524240	4994548	2.5	71	68.6	0	0.0	-1.0	4.6	1.5	0.0	0.0	0.0	0.0	--	500			
CW_Inv02	Cornwall - Inverter Cluster 02	1000	524240	4994548	2.5	65	68.6	0	0.0	-1.5	5.7	2.8	0.0	0.0	0.0	0.0	--	1000			
CW_Inv02	Cornwall - Inverter Cluster 02	2000	524240	4994548	2.5	58	68.6	0	0.0	-1.6	7.2	7.3	0.0	0.0	0.0	0.0	--	2000			
CW_Inv02	Cornwall - Inverter Cluster 02	4000	524240	4994548	2.5	49	68.6	0	0.0	-1.6	9.1	24.8	0.0	0.0	0.0	0.0	--	4000			
CW_Inv02	Cornwall - Inverter Cluster 02	8000	524240	4994548	2.5	54	68.6	0	0.0	-1.6	11.5	88.3	0.0	0.0	0.0	0.0	--	8000			
CW_Inv03	Cornwall - Inverter Cluster 03	32	524184	4994642	2.5	0	69.2	0	0.0	-5.2	2.1	0.0	0.0	0.0	0.0	0.0	--	32			
CW_Inv03	Cornwall - Inverter Cluster 03	63	524184	4994642	2.5	81	69.2	0	0.0	-5.2	2.7	0.1	0.0	0.0	0.0	0.0	14	63			
CW_Inv03	Cornwall - Inverter Cluster 03	125	524184	4994642	2.5	76	69.2	0	0.0	3.9	0.4	0.3	0.0	0.0	0.0	0.0	2	125			
CW_Inv03	Cornwall - Inverter Cluster 03	250	524184	4994642	2.5	76	69.2	0	0.0	2.8	1.8	0.8	0.0	0.0	0.0	0.0	2	250			
CW_Inv03	Cornwall - Inverter Cluster 03	500	524184	4994642	2.5	71	69.2	0	0.0	-1.0	4.9	1.6	0.0	0.0	0.0	0.0	--	500			
CW_Inv03	Cornwall - Inverter Cluster 03	1000	524184	4994642	2.5	65	69.2	0	0.0	-1.6	5.9	3.0	0.0	0.0	0.0	0.0	--	1000			
CW_Inv03	Cornwall - Inverter Cluster 03	2000	524184	4994642	2.5	58	69.2	0	0.0	-1.6	7.3	7.8	0.0	0.0	0.0	0.0	--	2000			
CW_Inv03	Cornwall - Inverter Cluster 03	4000	524184	4994642	2.5	49	69.2	0	0.0	-1.6	9.1	26.5	0.0	0.0	0.0	0.0	--	4000			
CW_Inv03	Cornwall - Inverter Cluster 03	8000	524184	4994642	2.5	54	69.2	0	0.0	-1.6	11.3	94.6	0.0	0.0	0.0	0.0	--	8000			
CW_Inv04	Cornwall - Inverter Cluster 04	32	524111	4994764	2.5	0	70.1	0	0.0	-5.3	0.0	0.0	0.0	0.0	0.0	0.0	--	32			
CW_Inv04	Cornwall - Inverter Cluster 04	63	524111	4994764	2.5	81	70.1	0	0.0	-5.3	0.0	0.1	0.0	0.0	0.0	0.0	16	63			
CW_Inv04	Cornwall - Inverter Cluster 04	125	524111	4994764	2.5	76	70.1	0	0.0	4.1	0.0	0.4	0.0	0.0	0.0	0.0	1	125			
CW_Inv04	Cornwall - Inverter Cluster 04	250	524111	4994764	2.5	76	70.1	0	0.0	2.8	0.0	0.9	0.0	0.0	0.0	0.0	3	250			
CW_Inv04	Cornwall - Inverter Cluster 04	500	524111	4994764	2.5	71	70.1	0	0.0	-1.0	0.0	1.7	0.0	0.0	0.0	0.0	0	500			
CW_Inv04	Cornwall - Inverter Cluster 04	1000	524111	4994764	2.5	65	70.1	0	0.0	-1.6	0.0	3.3	0.0	0.0	0.0	0.0	--	1000			
CW_Inv04	Cornwall - Inverter Cluster 04	2000	524111	4994764	2.5	58	70.1	0	0.0	-1.6	0.0	8.7	0.0	0.0	0.0	0.0	--	2000			
CW_Inv04	Cornwall - Inverter Cluster 04	4000	524111	4994764	2.5	49	70.1	0	0.0	-1.6	0.0	29.4	0.0	0.0	0.0	0.0	--	4000			
CW_Inv04	Cornwall - Inverter Cluster 04	8000	524111	4994764	2.5	54	70.1	0	0.0	-1.6	0.0	104.8	0.0	0.0	0.0	0.0	--	8000			
CW_Inv05	Cornwall - Inverter Cluster 05	32	524042	4994873	2.5	0	70.9	0	0.0	-5.4	0.0	0.0	0.0	0.0	0.0	0.0	--	32			
CW_Inv05	Cornwall - Inverter Cluster 05	63	524042	4994873	2.5	81	70.9	0	0.0	-5.4	0.0	0.1	0.0	0.0	0.0	0.0	15	63			
CW_Inv05	Cornwall - Inverter Cluster 05	125	524042	4994873	2.5	76	70.9	0	0.0	4.2	0.0	0.4	0.0	0.0	0.0	0.0	0	125			
CW_Inv05	Cornwall - Inverter Cluster 05	250	524042	4994873	2.5	76	70.9	0	0.0	2.8	0.0	1.0	0.0	0.0	0.0	0.0	2	250			
CW_Inv05	Cornwall - Inverter Cluster 05	500	524042	4994873	2.5	71	70.9	0	0.0	-1.1	0.0	1.9	0.0	0.0	0.0	0.0	--	500			
CW_Inv05	Cornwall - Inverter Cluster 05	1000	524042	4994873	2.5	65	70.9	0	0.0	-1.6	0.0	3.6	0.0	0.0	0.0	0.0	--	1000			
CW_Inv05	Cornwall - Inverter Cluster 05	2000	524042	4994873	2.5	58	70.9	0	0.0	-1.6	0.0	9.6	0.0	0.0	0.0	0.0	--	2000			
CW_Inv05	Cornwall - Inverter Cluster 05	4000	524042	4994873	2.5	49	70.9	0	0.0	-1.6	0.0	32.4	0.0	0.0	0.0	0.0	--	4000			
CW_Inv05	Cornwall - Inverter Cluster 05	8000	524042	4994873	2.5	54	70.9	0	0.0	-1.6	0.0	115.6	0.0	0.0	0.0	0.0	--	8000			
CW_Inv06	Cornwall - Inverter Cluster 06	32	523909	4994780	2.5	0	71.8	0	0.0	-5.4	0.0	0.0	0.0	0.0	0.0	0.0	--	32			
CW_Inv06	Cornwall - Inverter Cluster 06	63	523909	4994780	2.5	81	71.8	0	0.0	-5.4	0.0	0.1	0.0	0.0	0.0	0.0	14	63			
CW_Inv06	Cornwall - Inverter Cluster 06	125	523909	4994780	2.5	76	71.8	0	0.0	4.2	0.0	0.5	0.0	0.0	0.0	0.0	--	125			
CW_Inv06	Cornwall - Inverter Cluster 06	250	523909	4994780	2.5	76	71.8	0	0.0	2.8	0.0	1.2	0.0	0.0	0.0	0.0	1	250			
CW_Inv06	Cornwall - Inverter Cluster 06	500	523909	4994780	2.5	71	71.8	0	0.0	-1.1	0.0	2.1	0.0	0.0	0.0	0.0	--	500			
CW_Inv06	Cornwall - Inverter Cluster 06	1000	523909	4994780	2.5	65	71.8	0	0.0	-1.6	0.0	4.0	0.0	0.0	0.0	0.0	--	1000			
CW_Inv06	Cornwall - Inverter Cluster 06	2000	523909	4994780	2.5	58	71.8	0	0.0	-1.6	0.0	10.6	0.0	0.0	0.0	0.0	--	2000			
CW_Inv06	Cornwall - Inverter Cluster 06	4000	523909	4994780	2.5	49	71.8	0	0.0	-1.6	0.0	36.0	0.0	0.0	0.0	0.0	--	4000			
CW_Inv06	Cornwall - Inverter Cluster 06	8000	523909	4994780	2.5	54	71.8	0	0.0	-1.6	0.0	128.4	0.0	0.0	0.0	0.0	--	8000			
CW_Inv07	Cornwall - Inverter Cluster 07	32	523977	4994673	2.5	0	71.2	0	0.0	-5.4	0.0	0.0	0.0	0.0	0.0	0.0	--	32			
CW_Inv07	Cornwall - Inverter Cluster 07	63	523977	4994673	2.5	81	71.2	0	0.0	-5.4	0.0	0.1	0.0	0.0	0.0	0.0	15	63			
CW_Inv07	Cornwall - Inverter Cluster 07	125	523977	4994673	2.5	76	71.2	0	0.0	4.2	0.0	0.4	0.0	0.0	0.0	0.0	0	125			
CW_Inv07	Cornwall - Inverter Cluster 07	250	523977	4994673	2.5	76	71.2	0	0.0	2.8	0.0	1.1	0.0	0.0	0.0	0.0	1	250			
CW_Inv07	Cornwall - Inverter Cluster 07	500	523977	4994673	2.5	71	71.2	0	0.0	-1.1	0.0	2.0	0.0	0.0	0.0	0.0	--	500			
CW_Inv07	Cornwall - Inverter Cluster 07	1000	523977	4994673	2.5	65	71.2	0	0.0	-1.6	0.0	3.7	0.0	0.0	0.0	0.0	--	1000			
CW_Inv07	Cornwall - Inverter Cluster 07	2000	523977	4994673	2.5	58	71.2	0	0.0	-1.6	0.0	9.8	0.0	0.0	0.0	0.0	--	2000			
CW_Inv07	Cornwall - Inverter Cluster 07	4000	523977	4994673	2.5	49	71.2	0	0.0	-1.6	0.0	33.4	0.0	0.0	0.0	0.0	--	4000			
CW_Inv07	Cornwall - Inverter Cluster 07	8000	523977	4994673	2.5	54	71.2	0	0.0	-1.6	0.0	119.0	0.0	0.0	0.0	0.0	--	8000			
CW_Inv08	Cornwall - Inverter Cluster 08	32	524047	4994553	2.5	0	70.5	0	0.0	-5.3	0.0	0.0	0.0	0.0	0.0	0.0	--	32			
CW_Inv08	Cornwall - Inverter Cluster 08	63	524047	4994553	2.5	81	70.5	0	0.0	-5.3	0.0	0.1	0.0	0.0	0.0	0.0	15	63			
CW_Inv08	Cornwall - Inverter Cluster 08	125	524047	4994553	2.5	76	70.5	0	0.0	4.1	0.0	0.4	0.0	0.0	0.0	0.0					

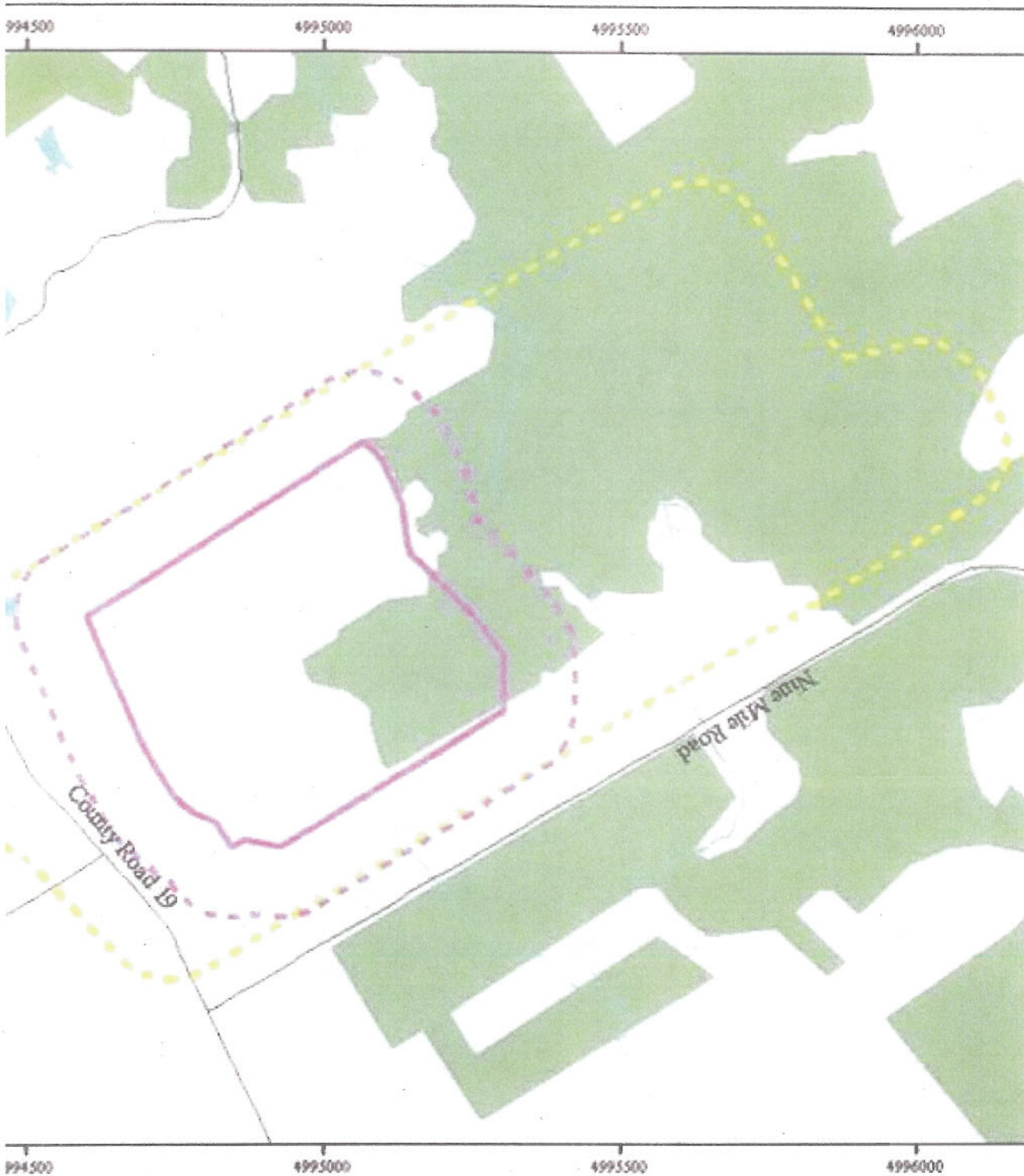
SrcID	Src Name	Band	X	Y	Z	Lx	Adiv	K0	Dc	Agnd	Abar	Aatm	Afol	Ahou	Cmet	Refi	Lr	Band
CW_Inv10	Cornwall - Inverter Cluster 10	125	524166	4994371	2.5	76	69.7	0	0.0	4.0	0.0	0.4	0.0	0.0	0.0	0.0	2	125
CW_Inv10	Cornwall - Inverter Cluster 10	250	524166	4994371	2.5	76	69.7	0	0.0	2.8	0.0	0.9	0.0	0.0	0.0	0.0	3	250
CW_Inv10	Cornwall - Inverter Cluster 10	500	524166	4994371	2.5	71	69.7	0	0.0	-1.0	0.0	1.7	0.0	0.0	0.0	0.0	0	500
CW_Inv10	Cornwall - Inverter Cluster 10	1000	524166	4994371	2.5	65	69.7	0	0.0	-1.6	0.0	3.1	0.0	0.0	0.0	0.0	-	1000
CW_Inv10	Cornwall - Inverter Cluster 10	2000	524166	4994371	2.5	58	69.7	0	0.0	-1.6	0.0	8.3	0.0	0.0	0.0	0.0	-	2000
CW_Inv10	Cornwall - Inverter Cluster 10	4000	524166	4994371	2.5	49	69.7	0	0.0	-1.6	0.0	28.1	0.0	0.0	0.0	0.0	-	4000
CW_Inv10	Cornwall - Inverter Cluster 10	8000	524166	4994371	2.5	54	69.7	0	0.0	-1.6	0.0	100.4	0.0	0.0	0.0	0.0	-	8000
CW_Sub	Cornwall - Transformer Substation	32	524396	4994373	3.0	44	67.1	0	0.0	-5.0	1.8	0.0	0.0	0.0	0.0	0.0	-	32
CW_Sub	Cornwall - Transformer Substation	63	524396	4994373	3.0	61	67.1	0	0.0	-5.0	2.1	0.1	0.0	0.0	0.0	0.0	-	63
CW_Sub	Cornwall - Transformer Substation	125	524396	4994373	3.0	74	67.1	0	0.0	3.5	0.3	0.3	0.0	0.0	0.0	0.0	3	125
CW_Sub	Cornwall - Transformer Substation	250	524396	4994373	3.0	80	67.1	0	0.0	2.2	1.8	0.7	0.0	0.0	0.0	0.0	8	250
CW_Sub	Cornwall - Transformer Substation	500	524396	4994373	3.0	85	67.1	0	0.0	-1.3	4.2	1.2	0.0	0.0	0.0	0.0	14	500
CW_Sub	Cornwall - Transformer Substation	1000	524396	4994373	3.0	82	67.1	0	0.0	-1.5	5.4	2.3	0.0	0.0	0.0	0.0	9	1000
CW_Sub	Cornwall - Transformer Substation	2000	524396	4994373	3.0	79	67.1	0	0.0	-1.5	6.9	6.2	0.0	0.0	0.0	0.0	-	2000
CW_Sub	Cornwall - Transformer Substation	4000	524396	4994373	3.0	73	67.1	0	0.0	-1.5	8.9	21.0	0.0	0.0	0.0	0.0	-	4000
CW_Sub	Cornwall - Transformer Substation	8000	524396	4994373	3.0	63	67.1	0	0.0	-1.5	11.2	74.8	0.0	0.0	0.0	0.0	-	8000
CW_Trans01	Cornwall - Inverter Transformer 01	32	524314	4994439	2.0	30	67.9	0	0.0	-5.2	3.4	0.0	0.0	0.0	0.0	0.0	-	32
CW_Trans01	Cornwall - Inverter Transformer 01	63	524314	4994439	2.0	47	67.9	0	0.0	-5.2	4.7	0.1	0.0	0.0	0.0	0.0	-	63
CW_Trans01	Cornwall - Inverter Transformer 01	125	524314	4994439	2.0	61	67.9	0	0.0	3.8	3.5	0.3	0.0	0.0	0.0	0.0	-	125
CW_Trans01	Cornwall - Inverter Transformer 01	250	524314	4994439	2.0	66	67.9	0	0.0	3.6	5.6	0.7	0.0	0.0	0.0	0.0	-	250
CW_Trans01	Cornwall - Inverter Transformer 01	500	524314	4994439	2.0	71	67.9	0	0.0	0.0	10.8	1.4	0.0	0.0	0.0	0.0	-	500
CW_Trans01	Cornwall - Inverter Transformer 01	1000	524314	4994439	2.0	69	67.9	0	0.0	-1.5	13.5	2.6	0.0	0.0	0.0	0.0	-	1000
CW_Trans01	Cornwall - Inverter Transformer 01	2000	524314	4994439	2.0	65	67.9	0	0.0	-1.6	16.3	6.8	0.0	0.0	0.0	0.0	-	2000
CW_Trans01	Cornwall - Inverter Transformer 01	4000	524314	4994439	2.0	60	67.9	0	0.0	-1.6	18.9	22.9	0.0	0.0	0.0	0.0	-	4000
CW_Trans01	Cornwall - Inverter Transformer 01	8000	524314	4994439	2.0	50	67.9	0	0.0	-1.6	19.4	81.7	0.0	0.0	0.0	0.0	-	8000
CW_Trans02	Cornwall - Inverter Transformer 02	32	524245	4994548	2.0	30	68.5	0	0.0	-5.2	3.2	0.0	0.0	0.0	0.0	0.0	-	32
CW_Trans02	Cornwall - Inverter Transformer 02	63	524245	4994548	2.0	47	68.5	0	0.0	-5.2	4.4	0.1	0.0	0.0	0.0	0.0	-	63
CW_Trans02	Cornwall - Inverter Transformer 02	125	524245	4994548	2.0	61	68.5	0	0.0	3.9	3.2	0.3	0.0	0.0	0.0	0.0	-	125
CW_Trans02	Cornwall - Inverter Transformer 02	250	524245	4994548	2.0	66	68.5	0	0.0	3.6	5.3	0.8	0.0	0.0	0.0	0.0	-	250
CW_Trans02	Cornwall - Inverter Transformer 02	500	524245	4994548	2.0	71	68.5	0	0.0	0.0	10.5	1.5	0.0	0.0	0.0	0.0	-	500
CW_Trans02	Cornwall - Inverter Transformer 02	1000	524245	4994548	2.0	69	68.5	0	0.0	-1.5	13.1	2.7	0.0	0.0	0.0	0.0	-	1000
CW_Trans02	Cornwall - Inverter Transformer 02	2000	524245	4994548	2.0	65	68.5	0	0.0	-1.6	16.0	7.3	0.0	0.0	0.0	0.0	-	2000
CW_Trans02	Cornwall - Inverter Transformer 02	4000	524245	4994548	2.0	60	68.5	0	0.0	-1.6	18.6	24.6	0.0	0.0	0.0	0.0	-	4000
CW_Trans02	Cornwall - Inverter Transformer 02	8000	524245	4994548	2.0	50	68.5	0	0.0	-1.6	19.3	87.7	0.0	0.0	0.0	0.0	-	8000
CW_Trans03	Cornwall - Inverter Transformer 03	32	524189	4994641	2.0	30	69.1	0	0.0	-5.3	3.4	0.0	0.0	0.0	0.0	0.0	-	32
CW_Trans03	Cornwall - Inverter Transformer 03	63	524189	4994641	2.0	47	69.1	0	0.0	-5.3	4.6	0.1	0.0	0.0	0.0	0.0	-	63
CW_Trans03	Cornwall - Inverter Transformer 03	125	524189	4994641	2.0	61	69.1	0	0.0	4.0	3.2	0.3	0.0	0.0	0.0	0.0	-	125
CW_Trans03	Cornwall - Inverter Transformer 03	250	524189	4994641	2.0	66	69.1	0	0.0	3.6	5.5	0.8	0.0	0.0	0.0	0.0	-	250
CW_Trans03	Cornwall - Inverter Transformer 03	500	524189	4994641	2.0	71	69.1	0	0.0	0.0	10.7	1.6	0.0	0.0	0.0	0.0	-	500
CW_Trans03	Cornwall - Inverter Transformer 03	1000	524189	4994641	2.0	69	69.1	0	0.0	-1.5	13.4	2.9	0.0	0.0	0.0	0.0	-	1000
CW_Trans03	Cornwall - Inverter Transformer 03	2000	524189	4994641	2.0	65	69.1	0	0.0	-1.6	16.2	7.8	0.0	0.0	0.0	0.0	-	2000
CW_Trans03	Cornwall - Inverter Transformer 03	4000	524189	4994641	2.0	60	69.1	0	0.0	-1.6	18.9	26.4	0.0	0.0	0.0	0.0	-	4000
CW_Trans03	Cornwall - Inverter Transformer 03	8000	524189	4994641	2.0	50	69.1	0	0.0	-1.6	19.4	94.1	0.0	0.0	0.0	0.0	-	8000
CW_Trans04	Cornwall - Inverter Transformer 04	32	524116	4994763	2.0	30	70.0	0	0.0	-5.3	0.0	0.0	0.0	0.0	0.0	0.0	-	32
CW_Trans04	Cornwall - Inverter Transformer 04	63	524116	4994763	2.0	47	70.0	0	0.0	-5.3	0.0	0.1	0.0	0.0	0.0	0.0	-	63
CW_Trans04	Cornwall - Inverter Transformer 04	125	524116	4994763	2.0	61	70.0	0	0.0	4.2	0.0	0.4	0.0	0.0	0.0	0.0	-	125
CW_Trans04	Cornwall - Inverter Transformer 04	250	524116	4994763	2.0	66	70.0	0	0.0	3.6	0.0	0.9	0.0	0.0	0.0	0.0	-	250
CW_Trans04	Cornwall - Inverter Transformer 04	500	524116	4994763	2.0	71	70.0	0	0.0	-0.1	0.0	1.7	0.0	0.0	0.0	0.0	-	500
CW_Trans04	Cornwall - Inverter Transformer 04	1000	524116	4994763	2.0	69	70.0	0	0.0	-1.5	0.0	3.3	0.0	0.0	0.0	0.0	-	1000
CW_Trans04	Cornwall - Inverter Transformer 04	2000	524116	4994763	2.0	65	70.0	0	0.0	-1.6	0.0	8.6	0.0	0.0	0.0	0.0	-	2000
CW_Trans04	Cornwall - Inverter Transformer 04	4000	524116	4994763	2.0	60	70.0	0	0.0	-1.6	0.0	29.2	0.0	0.0	0.0	0.0	-	4000
CW_Trans04	Cornwall - Inverter Transformer 04	8000	524116	4994763	2.0	50	70.0	0	0.0	-1.6	0.0	104.3	0.0	0.0	0.0	0.0	-	8000
CW_Trans05	Cornwall - Inverter Transformer 05	32	524047	4994873	2.0	30	70.9	0	0.0	-5.4	0.0	0.0	0.0	0.0	0.0	0.0	-	32
CW_Trans05	Cornwall - Inverter Transformer 05	63	524047	4994873	2.0	47	70.9	0	0.0	-5.4	0.0	0.1	0.0	0.0	0.0	0.0	-	63
CW_Trans05	Cornwall - Inverter Transformer 05	125	524047	4994873	2.0	61	70.9	0	0.0	4.3	0.0	0.4	0.0	0.0	0.0	0.0	-	125
CW_Trans05	Cornwall - Inverter Transformer 05	250	524047	4994873	2.0	66	70.9	0	0.0	3.6	0.0	1.0	0.0	0.0	0.0	0.0	-	250
CW_Trans05	Cornwall - Inverter Transformer 05	500	524047	4994873	2.0	71	70.9	0	0.0	-0.1	0.0	1.9	0.0	0.0	0.0	0.0	-	500
CW_Trans05	Cornwall - Inverter Transformer 05	1000	524047	4994873	2.0	69	70.9	0	0.0	-1.5	0.0	3.6	0.0	0.0	0.0	0.0	-	1000
CW_Trans05	Cornwall - Inverter Transformer 05	2000	524047	4994873	2.0	65	70.9	0	0.0	-1.6	0.0	9.5	0.0	0.0	0.0	0.0	-	2000
CW_Trans05	Cornwall - Inverter Transformer 05	4000	524047	4994873	2.0	60	70.9	0	0.0	-1.6	0.0	32.3	0.0	0.0	0.0	0.0	-	4000
CW_Trans05	Cornwall - Inverter Transformer 05	8000	524047	4994873	2.0	50	70.9	0	0.0	-1.6	0.0	115.0	0.0	0.0	0.0	0.0	-	8000
CW_Trans06	Cornwall - Inverter Transformer 06	32	523914	4994780	2.0	30	71.8	0	0.0	-5.5	0.0	0.0	0.0	0.0	0.0	0.0	-	32
CW_Trans06	Cornwall - Inverter Transformer 06	63	523914	4994780	2.0	47	71.8	0	0.0	-5.5	0.0	0.1	0.0	0.0	0.0	0.0	-	63
CW_Trans06	Cornwall - Inverter Transformer 06	125	523914	4994780	2.0	61	71.8	0	0.0	4.4	0.0	0.5	0.0	0.0	0.0	0.0	-	125
CW_Trans06	Cornwall - Inverter Transformer 06	250	523914	4994780	2.0	66	71.8	0	0.0	3.5	0.0	1.1	0.0	0.0	0.0	0.0	-	250
CW_Trans06	Cornwall - Inverter Transformer 06	500	523914	4994780	2.0	71	71.8	0	0.0	-0.1	0.0	2.1	0.0	0.0	0.0	0.0	-	500
CW_Trans06	Cornwall - Inverter Transformer 06	1000	523914	4994780	2.0	69	71.8	0	0.0	-1.5	0.0	4.0	0.0	0.0	0.0	0.0	-	1000
CW_Trans06	Cornwall - Inverter Transformer 06	2000	523914	4994780	2.0	65	71.8	0	0.0	-1.6	0.0	10.6	0.0	0.0	0.0	0.0	-	2000
CW_Trans06	Cornwall - Inverter Transformer 06	4000	523914	4994780	2.0	60	71.8	0	0.0	-1.6	0.0	35.8	0.0	0.0	0.0	0.0	-	4000
CW_Trans06	Cornwall - Inverter Transformer 06	8000	523914	4994780	2.0	50	71.8	0	0.0	-1.6	0.0	127.8	0.0	0.0	0.0	0.0	-	8000
CW_Trans07	Cornwall - Inverter Transformer 07	32	523982	4994672	2.0	30	71.1	0	0.0	-5.4	0.0	0.0	0.0	0.0	0.0	0.0	-	32
CW_Trans07	Cornwall - Inverter Transformer 07	63	523982	4994672	2.0	47	71.1	0	0.0	-5.4	0.0	0.1	0.0	0.0	0.0	0.0	-	63
CW_Trans07	Cornwall - Inverter Transformer 07	125	523982	4994672	2.0	61	71.1	0	0.0	4.4	0.0	0.4	0.0	0.0	0.0	0.0	-	125
CW_Trans07	Cornwall - Inverter Transformer 07	250																

SrcID	Src Name	Band	X	Y	Z	Lx	Adiv	K0	Dc	Agnd	Abar	Aatm	Afol	Ahous	Cmet	Refi	Lr	Band
CW_Trans08	Cornwall - Inverter Transformer 08	4000	524052	4994553	2.0	60	70.5	0	0.0	-1.6	0.0	30.9	0.0	0.0	0.0	0.0	--	4000
CW_Trans08	Cornwall - Inverter Transformer 08	8000	524052	4994553	2.0	50	70.5	0	0.0	-1.6	0.0	110.2	0.0	0.0	0.0	0.0	--	8000
CW_Trans09	Cornwall - Inverter Transformer 09	32	524120	4994452	2.0	30	70.0	0	0.0	-5.3	0.0	0.0	0.0	0.0	0.0	0.0	--	32
CW_Trans09	Cornwall - Inverter Transformer 09	63	524120	4994452	2.0	47	70.0	0	0.0	-5.3	0.0	0.1	0.0	0.0	0.0	0.0	--	63
CW_Trans09	Cornwall - Inverter Transformer 09	125	524120	4994452	2.0	61	70.0	0	0.0	4.2	0.0	0.4	0.0	0.0	0.0	0.0	--	125
CW_Trans09	Cornwall - Inverter Transformer 09	250	524120	4994452	2.0	66	70.0	0	0.0	3.6	0.0	0.9	0.0	0.0	0.0	0.0	--	250
CW_Trans09	Cornwall - Inverter Transformer 09	500	524120	4994452	2.0	71	70.0	0	0.0	0.0	0.0	1.7	0.0	0.0	0.0	0.0	--	500
CW_Trans09	Cornwall - Inverter Transformer 09	1000	524120	4994452	2.0	69	70.0	0	0.0	-1.5	0.0	3.3	0.0	0.0	0.0	0.0	--	1000
CW_Trans09	Cornwall - Inverter Transformer 09	2000	524120	4994452	2.0	65	70.0	0	0.0	-1.6	0.0	8.6	0.0	0.0	0.0	0.0	--	2000
CW_Trans09	Cornwall - Inverter Transformer 09	4000	524120	4994452	2.0	60	70.0	0	0.0	-1.6	0.0	29.0	0.0	0.0	0.0	0.0	--	4000
CW_Trans09	Cornwall - Inverter Transformer 09	8000	524120	4994452	2.0	50	70.0	0	0.0	-1.6	0.0	103.6	0.0	0.0	0.0	0.0	--	8000
CW_Trans10	Cornwall - Inverter Transformer 10	32	524171	4994371	2.0	30	69.6	0	0.0	-5.3	0.0	0.0	0.0	0.0	0.0	0.0	--	32
CW_Trans10	Cornwall - Inverter Transformer 10	63	524171	4994371	2.0	47	69.6	0	0.0	-5.3	0.0	0.1	0.0	0.0	0.0	0.0	--	63
CW_Trans10	Cornwall - Inverter Transformer 10	125	524171	4994371	2.0	61	69.6	0	0.0	4.1	0.0	0.4	0.0	0.0	0.0	0.0	--	125
CW_Trans10	Cornwall - Inverter Transformer 10	250	524171	4994371	2.0	66	69.6	0	0.0	3.6	0.0	0.9	0.0	0.0	0.0	0.0	--	250
CW_Trans10	Cornwall - Inverter Transformer 10	500	524171	4994371	2.0	71	69.6	0	0.0	0.0	0.0	1.7	0.0	0.0	0.0	0.0	0	500
CW_Trans10	Cornwall - Inverter Transformer 10	1000	524171	4994371	2.0	69	69.6	0	0.0	-1.5	0.0	3.1	0.0	0.0	0.0	0.0	--	1000
CW_Trans10	Cornwall - Inverter Transformer 10	2000	524171	4994371	2.0	65	69.6	0	0.0	-1.6	0.0	8.3	0.0	0.0	0.0	0.0	--	2000
CW_Trans10	Cornwall - Inverter Transformer 10	4000	524171	4994371	2.0	60	69.6	0	0.0	-1.6	0.0	28.0	0.0	0.0	0.0	0.0	--	4000
CW_Trans10	Cornwall - Inverter Transformer 10	8000	524171	4994371	2.0	50	69.6	0	0.0	-1.6	0.0	99.9	0.0	0.0	0.0	0.0	--	8000
NS-01	Inverter House MV1	32	524587	4994981	1.5	--	65.9	0	0.0	-5.0	0.0	0.0	0.0	0.0	0.0	0.0	--	32
NS-01	Inverter House MV1	63	524587	4994981	1.5	63	65.9	0	0.0	-5.0	0.0	0.1	0.0	0.0	0.0	0.0	2	63
NS-01	Inverter House MV1	125	524587	4994981	1.5	79	65.9	0	0.0	3.3	0.0	0.2	0.0	0.0	0.0	0.0	10	125
NS-01	Inverter House MV1	250	524587	4994981	1.5	78	65.9	0	0.0	4.4	0.0	0.6	0.0	0.0	0.0	0.0	8	250
NS-01	Inverter House MV1	500	524587	4994981	1.5	83	65.9	0	0.0	2.0	0.0	1.1	0.0	0.0	0.0	0.0	14	500
NS-01	Inverter House MV1	1000	524587	4994981	1.5	83	65.9	0	0.0	-1.1	0.0	2.0	0.0	0.0	0.0	0.0	16	1000
NS-01	Inverter House MV1	2000	524587	4994981	1.5	79	65.9	0	0.0	-1.5	0.0	5.4	0.0	0.0	0.0	0.0	9	2000
NS-01	Inverter House MV1	4000	524587	4994981	1.5	75	65.9	0	0.0	-1.5	0.0	18.2	0.0	0.0	0.0	0.0	--	4000
NS-01	Inverter House MV1	8000	524587	4994981	1.5	74	65.9	0	0.0	-1.5	0.0	64.8	0.0	0.0	0.0	0.0	--	8000
NS-02	Inverter House MV2	32	524595	4995076	1.5	--	66.8	0	0.0	-5.1	0.0	0.0	0.0	0.0	0.0	0.0	--	32
NS-02	Inverter House MV2	63	524595	4995076	1.5	66	66.8	0	0.0	-5.1	0.0	0.1	0.0	0.0	0.0	0.0	4	63
NS-02	Inverter House MV2	125	524595	4995076	1.5	82	66.8	0	0.0	3.6	0.0	0.3	0.0	0.0	0.0	0.0	11	125
NS-02	Inverter House MV2	250	524595	4995076	1.5	81	66.8	0	0.0	4.4	0.0	0.6	0.0	0.0	0.0	0.0	10	250
NS-02	Inverter House MV2	500	524595	4995076	1.5	86	66.8	0	0.0	2.0	0.0	1.2	0.0	0.0	0.0	0.0	16	500
NS-02	Inverter House MV2	1000	524595	4995076	1.5	86	66.8	0	0.0	-1.1	0.0	2.3	0.0	0.0	0.0	0.0	18	1000
NS-02	Inverter House MV2	2000	524595	4995076	1.5	82	66.8	0	0.0	-1.5	0.0	6.0	0.0	0.0	0.0	0.0	11	2000
NS-02	Inverter House MV2	4000	524595	4995076	1.5	78	66.8	0	0.0	-1.5	0.0	20.2	0.0	0.0	0.0	0.0	--	4000
NS-02	Inverter House MV2	8000	524595	4995076	1.5	77	66.8	0	0.0	-1.5	0.0	72.2	0.0	0.0	0.0	0.0	--	8000
NS-03	Inverter House MV3	32	524627	4994781	1.5	--	63.2	0	0.0	-4.7	0.0	0.0	0.0	0.0	0.0	0.0	--	32
NS-03	Inverter House MV3	63	524627	4994781	1.5	66	63.2	0	0.0	-4.7	0.0	0.0	0.0	0.0	0.0	0.0	7	63
NS-03	Inverter House MV3	125	524627	4994781	1.5	82	63.2	0	0.0	2.6	0.0	0.2	0.0	0.0	0.0	0.0	16	125
NS-03	Inverter House MV3	250	524627	4994781	1.5	81	63.2	0	0.0	4.5	0.0	0.4	0.0	0.0	0.0	0.0	13	250
NS-03	Inverter House MV3	500	524627	4994781	1.5	86	63.2	0	0.0	2.1	0.0	0.8	0.0	0.0	0.0	0.0	20	500
NS-03	Inverter House MV3	1000	524627	4994781	1.5	86	63.2	0	0.0	-0.9	0.0	1.5	0.0	0.0	0.0	0.0	22	1000
NS-03	Inverter House MV3	2000	524627	4994781	1.5	82	63.2	0	0.0	-1.4	0.0	3.9	0.0	0.0	0.0	0.0	16	2000
NS-03	Inverter House MV3	4000	524627	4994781	1.5	78	63.2	0	0.0	-1.4	0.0	13.3	0.0	0.0	0.0	0.0	3	4000
NS-03	Inverter House MV3	8000	524627	4994781	1.5	77	63.2	0	0.0	-1.4	0.0	47.6	0.0	0.0	0.0	0.0	--	8000
NS-04	Inverter House MV4	32	524638	4994914	1.5	--	64.5	0	0.0	-4.9	0.0	0.0	0.0	0.0	0.0	0.0	--	32
NS-04	Inverter House MV4	63	524638	4994914	1.5	66	64.5	0	0.0	-4.9	0.0	0.1	0.0	0.0	0.0	0.0	6	63
NS-04	Inverter House MV4	125	524638	4994914	1.5	82	64.5	0	0.0	2.9	0.0	0.2	0.0	0.0	0.0	0.0	14	125
NS-04	Inverter House MV4	250	524638	4994914	1.5	81	64.5	0	0.0	4.4	0.0	0.5	0.0	0.0	0.0	0.0	12	250
NS-04	Inverter House MV4	500	524638	4994914	1.5	86	64.5	0	0.0	2.0	0.0	0.9	0.0	0.0	0.0	0.0	18	500
NS-04	Inverter House MV4	1000	524638	4994914	1.5	86	64.5	0	0.0	-1.0	0.0	1.7	0.0	0.0	0.0	0.0	21	1000
NS-04	Inverter House MV4	2000	524638	4994914	1.5	82	64.5	0	0.0	-1.5	0.0	4.6	0.0	0.0	0.0	0.0	15	2000
NS-04	Inverter House MV4	4000	524638	4994914	1.5	78	64.5	0	0.0	-1.5	0.0	15.5	0.0	0.0	0.0	0.0	--	4000
NS-04	Inverter House MV4	8000	524638	4994914	1.5	77	64.5	0	0.0	-1.5	0.0	55.2	0.0	0.0	0.0	0.0	--	8000
NS-05	Inverter House MV5	32	524652	4995066	1.5	--	66.2	0	0.0	-5.1	0.0	0.0	0.0	0.0	0.0	0.0	--	32
NS-05	Inverter House MV5	63	524652	4995066	1.5	66	66.2	0	0.0	-5.1	0.0	0.1	0.0	0.0	0.0	0.0	5	63
NS-05	Inverter House MV5	125	524652	4995066	1.5	82	66.2	0	0.0	3.4	0.0	0.2	0.0	0.0	0.0	0.0	12	125
NS-05	Inverter House MV5	250	524652	4995066	1.5	81	66.2	0	0.0	4.4	0.0	0.6	0.0	0.0	0.0	0.0	10	250
NS-05	Inverter House MV5	500	524652	4995066	1.5	86	66.2	0	0.0	2.0	0.0	1.1	0.0	0.0	0.0	0.0	17	500
NS-05	Inverter House MV5	1000	524652	4995066	1.5	86	66.2	0	0.0	-1.1	0.0	2.1	0.0	0.0	0.0	0.0	19	1000
NS-05	Inverter House MV5	2000	524652	4995066	1.5	82	66.2	0	0.0	-1.5	0.0	5.6	0.0	0.0	0.0	0.0	12	2000
NS-05	Inverter House MV5	4000	524652	4995066	1.5	78	66.2	0	0.0	-1.5	0.0	18.8	0.0	0.0	0.0	0.0	--	4000
NS-05	Inverter House MV5	8000	524652	4995066	1.5	77	66.2	0	0.0	-1.5	0.0	67.2	0.0	0.0	0.0	0.0	--	8000
NS-06	Inverter House MV6	32	524754	4995247	1.5	--	67.7	0	0.0	-5.2	0.0	0.0	0.0	0.0	0.0	0.0	--	32
NS-06	Inverter House MV6	63	524754	4995247	1.5	66	67.7	0	0.0	-5.2	0.0	0.1	0.0	0.0	0.0	0.0	3	63
NS-06	Inverter House MV6	125	524754	4995247	1.5	82	67.7	0	0.0	3.8	0.0	0.3	0.0	0.0	0.0	0.0	10	125
NS-06	Inverter House MV6	250	524754	4995247	1.5	81	67.7	0	0.0	4.3	0.0	0.7	0.0	0.0	0.0	0.0	9	250
NS-06	Inverter House MV6	500	524754	4995247	1.5	86	67.7	0	0.0	1.9	0.0	1.3	0.0	0.0	0.0	0.0	15	500
NS-06	Inverter House MV6	1000	524754	4995247	1.5	86	67.7	0	0.0	-1.1	0.0	2.5	0.0	0.0	0.0	0.0	17	1000
NS-06	Inverter House MV6	2000	524754	4995247	1.5	82	67.7	0	0.0	-1.6	0.0	6.6	0.0	0.0	0.0	0.0	9	2000
NS-06	Inverter House MV6	4000	524754	4995247	1.5	78	67.7	0	0.0	-1.6	0.0	22.5	0.0	0.0	0.0	0.0	--	4000
NS-06	Inverter House MV6	8000	524754	4995247	1.5	77	67.7	0	0.0	-1.6	0.0	80.2	0.0	0.0	0.0	0.0	--	8000
NS-07	Inverter House MV7	32	524896	4994772	1.5	--	56.											

Src ID	Src Name	Band	X	Y	Z	Lx	Adiv	K0	Dc	Agnd	Abar	Aatm	Afol	Ahaus	Cmet	Refl	Lr	Band
NS-08	Inverter House MV8	250	524908	4994905	1.5	81	60.9	0	0.0	4.6	0.0	0.3	0.0	0.0	0.0	0.0	16	250
NS-08	Inverter House MV8	500	524908	4994905	1.5	86	60.9	0	0.0	2.2	0.0	0.6	0.0	0.0	0.0	0.0	22	500
NS-08	Inverter House MV8	1000	524908	4994905	1.5	86	60.9	0	0.0	-0.8	0.0	1.2	0.0	0.0	0.0	0.0	25	1000
NS-08	Inverter House MV8	2000	524908	4994905	1.5	82	60.9	0	0.0	-1.3	0.0	3.0	0.0	0.0	0.0	0.0	20	2000
NS-08	Inverter House MV8	4000	524908	4994905	1.5	78	60.9	0	0.0	-1.3	0.0	10.3	0.0	0.0	0.0	0.0	8	4000
NS-08	Inverter House MV8	8000	524908	4994905	1.5	77	60.9	0	0.0	-1.3	0.0	36.6	0.0	0.0	0.0	0.0	--	8000
NS-09	Inverter House MV9	32	524921	4995057	1.5	--	64.2	0	0.0	-4.8	0.0	0.0	0.0	0.0	0.0	0.0	--	32
NS-09	Inverter House MV9	63	524921	4995057	1.5	66	64.2	0	0.0	-4.8	0.0	0.1	0.0	0.0	0.0	0.0	6	63
NS-09	Inverter House MV9	125	524921	4995057	1.5	82	64.2	0	0.0	2.8	0.0	0.2	0.0	0.0	0.0	0.0	15	125
NS-09	Inverter House MV9	250	524921	4995057	1.5	81	64.2	0	0.0	4.4	0.0	0.5	0.0	0.0	0.0	0.0	12	250
NS-09	Inverter House MV9	500	524921	4995057	1.5	86	64.2	0	0.0	2.0	0.0	0.9	0.0	0.0	0.0	0.0	19	500
NS-09	Inverter House MV9	1000	524921	4995057	1.5	86	64.2	0	0.0	-1.0	0.0	1.7	0.0	0.0	0.0	0.0	21	1000
NS-09	Inverter House MV9	2000	524921	4995057	1.5	82	64.2	0	0.0	-1.5	0.0	4.4	0.0	0.0	0.0	0.0	15	2000
NS-09	Inverter House MV9	4000	524921	4995057	1.5	78	64.2	0	0.0	-1.5	0.0	15.0	0.0	0.0	0.0	0.0	0	4000
NS-09	Inverter House MV9	8000	524921	4995057	1.5	77	64.2	0	0.0	-1.5	0.0	53.6	0.0	0.0	0.0	0.0	--	8000
NS-10	Inverter House MV10	32	524968	4994933	1.5	--	61.4	0	0.0	-4.4	0.0	0.0	0.0	0.0	0.0	0.0	--	32
NS-10	Inverter House MV10	63	524968	4994933	1.5	66	61.4	0	0.0	-4.4	0.0	0.1	0.0	0.0	0.0	0.0	9	63
NS-10	Inverter House MV10	125	524968	4994933	1.5	82	61.4	0	0.0	2.2	0.0	0.1	0.0	0.0	0.0	0.0	18	125
NS-10	Inverter House MV10	250	524968	4994933	1.5	81	61.4	0	0.0	4.6	0.0	0.3	0.0	0.0	0.0	0.0	15	250
NS-10	Inverter House MV10	500	524968	4994933	1.5	86	61.4	0	0.0	2.2	0.0	0.6	0.0	0.0	0.0	0.0	22	500
NS-10	Inverter House MV10	1000	524968	4994933	1.5	86	61.4	0	0.0	-0.9	0.0	1.2	0.0	0.0	0.0	0.0	24	1000
NS-10	Inverter House MV10	2000	524968	4994933	1.5	82	61.4	0	0.0	-1.3	0.0	3.2	0.0	0.0	0.0	0.0	19	2000
NS-10	Inverter House MV10	4000	524968	4994933	1.5	78	61.4	0	0.0	-1.3	0.0	10.8	0.0	0.0	0.0	0.0	7	4000
NS-10	Inverter House MV10	8000	524968	4994933	1.5	77	61.4	0	0.0	-1.3	0.0	38.6	0.0	0.0	0.0	0.0	--	8000
NS-11	Transformer 1 MVA (MV1)	32	524592	4994980	1.5	--	65.8	0	0.0	-5.0	0.0	0.0	0.0	0.0	0.0	0.0	--	32
NS-11	Transformer 1 MVA (MV1)	63	524592	4994980	1.5	45	65.8	0	0.0	-5.0	0.0	0.1	0.0	0.0	0.0	0.0	--	63
NS-11	Transformer 1 MVA (MV1)	125	524592	4994980	1.5	58	65.8	0	0.0	3.2	0.0	0.2	0.0	0.0	0.0	0.0	--	125
NS-11	Transformer 1 MVA (MV1)	250	524592	4994980	1.5	60	65.8	0	0.0	4.4	0.0	0.6	0.0	0.0	0.0	0.0	--	250
NS-11	Transformer 1 MVA (MV1)	500	524592	4994980	1.5	65	65.8	0	0.0	2.0	0.0	1.1	0.0	0.0	0.0	0.0	--	500
NS-11	Transformer 1 MVA (MV1)	1000	524592	4994980	1.5	63	65.8	0	0.0	-1.0	0.0	2.0	0.0	0.0	0.0	0.0	--	1000
NS-11	Transformer 1 MVA (MV1)	2000	524592	4994980	1.5	59	65.8	0	0.0	-1.5	0.0	5.3	0.0	0.0	0.0	0.0	--	2000
NS-11	Transformer 1 MVA (MV1)	4000	524592	4994980	1.5	54	65.8	0	0.0	-1.5	0.0	18.0	0.0	0.0	0.0	0.0	--	4000
NS-11	Transformer 1 MVA (MV1)	8000	524592	4994980	1.5	45	65.8	0	0.0	-1.5	0.0	64.4	0.0	0.0	0.0	0.0	--	8000
NS-12	Transformer 1 MVA (MV2)	32	524600	4995075	1.5	--	66.8	0	0.0	-5.1	0.0	0.0	0.0	0.0	0.0	0.0	--	32
NS-12	Transformer 1 MVA (MV2)	63	524600	4995075	1.5	45	66.8	0	0.0	-5.1	0.0	0.1	0.0	0.0	0.0	0.0	--	63
NS-12	Transformer 1 MVA (MV2)	125	524600	4995075	1.5	58	66.8	0	0.0	3.5	0.0	0.3	0.0	0.0	0.0	0.0	--	125
NS-12	Transformer 1 MVA (MV2)	250	524600	4995075	1.5	60	66.8	0	0.0	4.4	0.0	0.6	0.0	0.0	0.0	0.0	--	250
NS-12	Transformer 1 MVA (MV2)	500	524600	4995075	1.5	65	66.8	0	0.0	2.0	0.0	1.2	0.0	0.0	0.0	0.0	--	500
NS-12	Transformer 1 MVA (MV2)	1000	524600	4995075	1.5	63	66.8	0	0.0	-1.1	0.0	2.2	0.0	0.0	0.0	0.0	--	1000
NS-12	Transformer 1 MVA (MV2)	2000	524600	4995075	1.5	59	66.8	0	0.0	-1.5	0.0	5.9	0.0	0.0	0.0	0.0	--	2000
NS-12	Transformer 1 MVA (MV2)	4000	524600	4995075	1.5	54	66.8	0	0.0	-1.5	0.0	20.1	0.0	0.0	0.0	0.0	--	4000
NS-12	Transformer 1 MVA (MV2)	8000	524600	4995075	1.5	45	66.8	0	0.0	-1.5	0.0	71.8	0.0	0.0	0.0	0.0	--	8000
NS-13	Transformer 1 MVA (MV3)	32	524622	4994782	1.5	--	63.3	0	0.0	-4.7	0.0	0.0	0.0	0.0	0.0	0.0	--	32
NS-13	Transformer 1 MVA (MV3)	63	524622	4994782	1.5	45	63.3	0	0.0	-4.7	0.0	0.1	0.0	0.0	0.0	0.0	--	63
NS-13	Transformer 1 MVA (MV3)	125	524622	4994782	1.5	58	63.3	0	0.0	2.6	0.0	0.2	0.0	0.0	0.0	0.0	--	125
NS-13	Transformer 1 MVA (MV3)	250	524622	4994782	1.5	60	63.3	0	0.0	4.5	0.0	0.4	0.0	0.0	0.0	0.0	--	250
NS-13	Transformer 1 MVA (MV3)	500	524622	4994782	1.5	65	63.3	0	0.0	2.1	0.0	0.8	0.0	0.0	0.0	0.0	--	500
NS-13	Transformer 1 MVA (MV3)	1000	524622	4994782	1.5	63	63.3	0	0.0	-0.9	0.0	1.5	0.0	0.0	0.0	0.0	--	1000
NS-13	Transformer 1 MVA (MV3)	2000	524622	4994782	1.5	59	63.3	0	0.0	-1.4	0.0	4.0	0.0	0.0	0.0	0.0	--	2000
NS-13	Transformer 1 MVA (MV3)	4000	524622	4994782	1.5	54	63.3	0	0.0	-1.4	0.0	13.5	0.0	0.0	0.0	0.0	--	4000
NS-13	Transformer 1 MVA (MV3)	8000	524622	4994782	1.5	45	63.3	0	0.0	-1.4	0.0	48.1	0.0	0.0	0.0	0.0	--	8000
NS-14	Transformer 1 MVA (MV4)	32	524634	4994914	1.5	--	64.5	0	0.0	-4.9	0.0	0.0	0.0	0.0	0.0	0.0	--	32
NS-14	Transformer 1 MVA (MV4)	63	524634	4994914	1.5	45	64.5	0	0.0	-4.9	0.0	0.1	0.0	0.0	0.0	0.0	--	63
NS-14	Transformer 1 MVA (MV4)	125	524634	4994914	1.5	58	64.5	0	0.0	2.9	0.0	0.2	0.0	0.0	0.0	0.0	--	125
NS-14	Transformer 1 MVA (MV4)	250	524634	4994914	1.5	60	64.5	0	0.0	4.4	0.0	0.5	0.0	0.0	0.0	0.0	--	250
NS-14	Transformer 1 MVA (MV4)	500	524634	4994914	1.5	65	64.5	0	0.0	2.0	0.0	0.9	0.0	0.0	0.0	0.0	--	500
NS-14	Transformer 1 MVA (MV4)	1000	524634	4994914	1.5	63	64.5	0	0.0	-1.0	0.0	1.7	0.0	0.0	0.0	0.0	--	1000
NS-14	Transformer 1 MVA (MV4)	2000	524634	4994914	1.5	59	64.5	0	0.0	-1.5	0.0	4.6	0.0	0.0	0.0	0.0	--	2000
NS-14	Transformer 1 MVA (MV4)	4000	524634	4994914	1.5	54	64.5	0	0.0	-1.5	0.0	15.6	0.0	0.0	0.0	0.0	--	4000
NS-14	Transformer 1 MVA (MV4)	8000	524634	4994914	1.5	45	64.5	0	0.0	-1.5	0.0	55.6	0.0	0.0	0.0	0.0	--	8000
NS-15	Transformer 1 MVA (MV5)	32	524647	4995067	1.5	--	66.2	0	0.0	-5.1	0.0	0.0	0.0	0.0	0.0	0.0	--	32
NS-15	Transformer 1 MVA (MV5)	63	524647	4995067	1.5	45	66.2	0	0.0	-5.1	0.0	0.1	0.0	0.0	0.0	0.0	--	63
NS-15	Transformer 1 MVA (MV5)	125	524647	4995067	1.5	58	66.2	0	0.0	3.4	0.0	0.2	0.0	0.0	0.0	0.0	--	125
NS-15	Transformer 1 MVA (MV5)	250	524647	4995067	1.5	60	66.2	0	0.0	4.4	0.0	0.6	0.0	0.0	0.0	0.0	--	250
NS-15	Transformer 1 MVA (MV5)	500	524647	4995067	1.5	65	66.2	0	0.0	2.0	0.0	1.1	0.0	0.0	0.0	0.0	--	500
NS-15	Transformer 1 MVA (MV5)	1000	524647	4995067	1.5	63	66.2	0	0.0	-1.1	0.0	2.1	0.0	0.0	0.0	0.0	--	1000
NS-15	Transformer 1 MVA (MV5)	2000	524647	4995067	1.5	59	66.2	0	0.0	-1.5	0.0	5.6	0.0	0.0	0.0	0.0	--	2000
NS-15	Transformer 1 MVA (MV5)	4000	524647	4995067	1.5	54	66.2	0	0.0	-1.5	0.0	18.9	0.0	0.0	0.0	0.0	--	4000
NS-15	Transformer 1 MVA (MV5)	8000	524647	4995067	1.5	45	66.2	0	0.0	-1.5	0.0	67.6	0.0	0.0	0.0	0.0	--	8000
NS-16	Transformer 1 MVA (MV6)	32	524750	4995247	1.5	--	67.8	0	0.0	-5.2	0.0	0.0	0.0	0.0	0.0	0.0	--	32
NS-16	Transformer 1 MVA (MV6)	63	524750	4995247	1.5	45	67.8	0	0.0	-5.2	0.0	0.1	0.0	0.0	0.0	0.0	--	63
NS-16	Transformer 1 MVA (MV6)	125	524750	4995247	1.5	58	67.8	0	0.0	3.8	0.0	0.3	0.0	0.0	0.0	0.0	--	125
NS-16	Transformer 1 MVA (MV6)	250	524750	4995247	1.5	60	67.8	0	0.0	4.3	0.0	0.7	0.0	0.0	0.0	0.0	--	250
NS-16	Transformer 1 MVA (MV6)	500	524750	4995247	1.5	65	67.8	0	0.0	1.9	0.0	1.3	0.0	0.0	0.0	0.0	--	500

Src ID	Src Name	Band	X	Y	Z	Lx	Adiv	K0	Dc	Agnd	Abar	Aatm	Afol	Ahous	Cmet	Refl	Lr	Band
NS-17	Transformer 1 MVA (MV7)	8000	524901	4994772	1.5	45	56.6	0	0.0	-1.0	0.0	22.4	0.0	0.0	0.0	0.0	--	8000
NS-18	Transformer 1 MVA (MV8)	32	524913	4994905	1.5	--	60.9	0	0.0	-4.3	0.0	0.0	0.0	0.0	0.0	0.0	--	32
NS-18	Transformer 1 MVA (MV8)	63	524913	4994905	1.5	45	60.9	0	0.0	-4.3	0.0	0.0	0.0	0.0	0.0	0.0	--	63
NS-18	Transformer 1 MVA (MV8)	125	524913	4994905	1.5	58	60.9	0	0.0	2.2	0.0	0.1	0.0	0.0	0.0	0.0	--	125
NS-18	Transformer 1 MVA (MV8)	250	524913	4994905	1.5	60	60.9	0	0.0	4.6	0.0	0.3	0.0	0.0	0.0	0.0	--	250
NS-18	Transformer 1 MVA (MV8)	500	524913	4994905	1.5	65	60.9	0	0.0	2.2	0.0	0.6	0.0	0.0	0.0	0.0	2	500
NS-18	Transformer 1 MVA (MV8)	1000	524913	4994905	1.5	63	60.9	0	0.0	-0.8	0.0	1.1	0.0	0.0	0.0	0.0	1	1000
NS-18	Transformer 1 MVA (MV8)	2000	524913	4994905	1.5	59	60.9	0	0.0	-1.3	0.0	3.0	0.0	0.0	0.0	0.0	--	2000
NS-18	Transformer 1 MVA (MV8)	4000	524913	4994905	1.5	54	60.9	0	0.0	-1.3	0.0	10.2	0.0	0.0	0.0	0.0	--	4000
NS-18	Transformer 1 MVA (MV8)	8000	524913	4994905	1.5	45	60.9	0	0.0	-1.3	0.0	36.4	0.0	0.0	0.0	0.0	--	8000
NS-19	Transformer 1 MVA (MV9)	32	524926	4995056	1.5	--	64.2	0	0.0	-4.8	0.0	0.0	0.0	0.0	0.0	0.0	--	32
NS-19	Transformer 1 MVA (MV9)	63	524926	4995056	1.5	45	64.2	0	0.0	-4.8	0.0	0.1	0.0	0.0	0.0	0.0	--	63
NS-19	Transformer 1 MVA (MV9)	125	524926	4995056	1.5	58	64.2	0	0.0	2.8	0.0	0.2	0.0	0.0	0.0	0.0	--	125
NS-19	Transformer 1 MVA (MV9)	250	524926	4995056	1.5	60	64.2	0	0.0	4.4	0.0	0.5	0.0	0.0	0.0	0.0	--	250
NS-19	Transformer 1 MVA (MV9)	500	524926	4995056	1.5	65	64.2	0	0.0	2.0	0.0	0.9	0.0	0.0	0.0	0.0	--	500
NS-19	Transformer 1 MVA (MV9)	1000	524926	4995056	1.5	63	64.2	0	0.0	-1.0	0.0	1.7	0.0	0.0	0.0	0.0	--	1000
NS-19	Transformer 1 MVA (MV9)	2000	524926	4995056	1.5	59	64.2	0	0.0	-1.5	0.0	4.4	0.0	0.0	0.0	0.0	--	2000
NS-19	Transformer 1 MVA (MV9)	4000	524926	4995056	1.5	54	64.2	0	0.0	-1.5	0.0	15.0	0.0	0.0	0.0	0.0	--	4000
NS-19	Transformer 1 MVA (MV9)	8000	524926	4995056	1.5	45	64.2	0	0.0	-1.5	0.0	53.5	0.0	0.0	0.0	0.0	--	8000
NS-20	Transformer 1 MVA (MV10)	32	524963	4994933	1.5	--	61.4	0	0.0	-4.4	0.0	0.0	0.0	0.0	0.0	0.0	--	32
NS-20	Transformer 1 MVA (MV10)	63	524963	4994933	1.5	45	61.4	0	0.0	-4.4	0.0	0.0	0.0	0.0	0.0	0.0	--	63
NS-20	Transformer 1 MVA (MV10)	125	524963	4994933	1.5	58	61.4	0	0.0	2.2	0.0	0.1	0.0	0.0	0.0	0.0	--	125
NS-20	Transformer 1 MVA (MV10)	250	524963	4994933	1.5	60	61.4	0	0.0	4.6	0.0	0.4	0.0	0.0	0.0	0.0	--	250
NS-20	Transformer 1 MVA (MV10)	500	524963	4994933	1.5	65	61.4	0	0.0	2.2	0.0	0.6	0.0	0.0	0.0	0.0	1	500
NS-20	Transformer 1 MVA (MV10)	1000	524963	4994933	1.5	63	61.4	0	0.0	-0.9	0.0	1.2	0.0	0.0	0.0	0.0	1	1000
NS-20	Transformer 1 MVA (MV10)	2000	524963	4994933	1.5	59	61.4	0	0.0	-1.3	0.0	3.2	0.0	0.0	0.0	0.0	--	2000
NS-20	Transformer 1 MVA (MV10)	4000	524963	4994933	1.5	54	61.4	0	0.0	-1.3	0.0	10.9	0.0	0.0	0.0	0.0	--	4000
NS-20	Transformer 1 MVA (MV10)	8000	524963	4994933	1.5	45	61.4	0	0.0	-1.3	0.0	38.7	0.0	0.0	0.0	0.0	--	8000
NS-21	Transformer 10 MVA	32	525013	4994843	2.0	--	58.6	0	0.0	-3.6	0.0	0.0	0.0	0.0	0.0	0.0	--	32
NS-21	Transformer 10 MVA	63	525013	4994843	2.0	64	58.6	0	0.0	-3.6	0.0	0.0	0.0	0.0	0.0	0.0	9	63
NS-21	Transformer 10 MVA	125	525013	4994843	2.0	77	58.6	0	0.0	2.2	0.0	0.1	0.0	0.0	0.0	0.0	16	125
NS-21	Transformer 10 MVA	250	525013	4994843	2.0	79	58.6	0	0.0	4.1	0.0	0.3	0.0	0.0	0.0	0.0	16	250
NS-21	Transformer 10 MVA	500	525013	4994843	2.0	84	58.6	0	0.0	0.5	0.0	0.5	0.0	0.0	0.0	0.0	25	500
NS-21	Transformer 10 MVA	1000	525013	4994843	2.0	82	58.6	0	0.0	-1.0	0.0	0.9	0.0	0.0	0.0	0.0	23	1000
NS-21	Transformer 10 MVA	2000	525013	4994843	2.0	78	58.6	0	0.0	-1.1	0.0	2.3	0.0	0.0	0.0	0.0	18	2000
NS-21	Transformer 10 MVA	4000	525013	4994843	2.0	73	58.6	0	0.0	-1.1	0.0	7.9	0.0	0.0	0.0	0.0	7	4000
NS-21	Transformer 10 MVA	8000	525013	4994843	2.0	64	58.6	0	0.0	-1.1	0.0	28.0	0.0	0.0	0.0	0.0	--	8000

Where: $Lr = Lx + Adiv + K0 + Dc - Agnd - Abar - Aatm - Afol - Ahous + Cmet + Refl$



Legend

-  REGF Project Location
-  REGF Study Area (project location and adjacent lands)
-  Initial Surveyed Area



Produced by Bowfin Environmental Consulting Inc.
Data Source:

Penn Energy – S. Glengarry_St. Lawrence-1 Solar Farm Archaeological Assessment Area

