



SMALL WIND  
CERTIFICATION  
COUNCIL™

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## Small Wind Turbine Certification Policy

*SWCC1*

*October 25, 2016*

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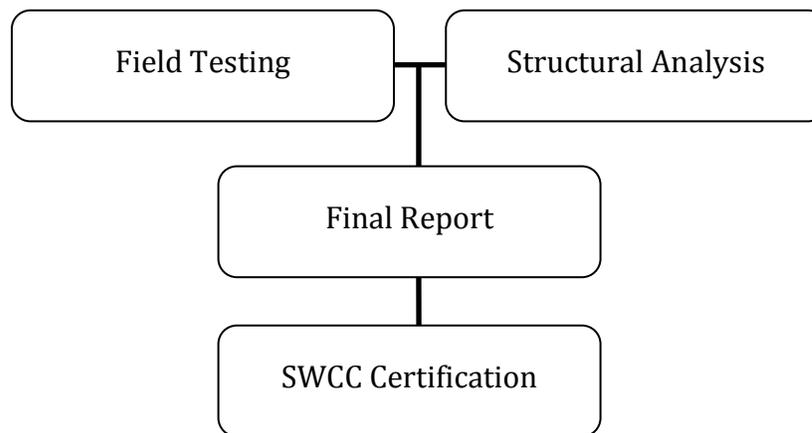
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## A. Introduction

The Small Wind Certification Council (SWCC) is an independent, third-party certification body that certifies wind turbines. For turbines with a swept area that is less than or equal to 200 m<sup>2</sup>, SWCC offers certification to the requirements of the AWEA *Small Wind Turbine Performance and Safety Standard* (AWEA Standard).

SWCC Certification is based on the evaluation of both a wind turbine structural analysis and field testing. Field testing includes a power performance test, acoustic sound test, safety and function test, and duration test. The results of such field testing and structural analysis are documented in a final report, which is submitted to SWCC for review. SWCC Certification is granted on the basis of an assessment of the completeness and correctness of the final report, and whether the SWT conforms to all requirements of the AWEA Standard.



**Figure A – Modules of SWCC Certification**

## B. Purpose and Scope

1. Purpose. This Certification Policy (Policy) has been adopted by the SWCC Board of Directors to define appropriate rules and procedures for the voluntary certification of eligible SWTs while ensuring the impartiality and objectivity of SWCC's certification decisions. The Policy is the sole and exclusive means by which an Applicant may apply for SWCC Certification.

The Policy serves to define the process and requirements for:

- a. Structural analysis of a SWT for the purpose of certification;
- b. Testing of a SWT for the purpose of certification;
- c. Reporting requirements related to such testing and analysis;

- d. SWCC Certification of a SWT;
  - e. Maintenance and renewal of SWCC Certification;
  - f. Consumer labeling of a certified SWT; and,
  - g. Reviewing and resolving certification deficiencies and violation matters.
2. Scope. SWCC certification requirements, evaluations, and decisions are based on appropriate standards and information specifically related to the purposes and scope of the certification. The scope of this Policy is to establish an objective and otherwise appropriate process to assess and certify that a SWT meets the requirements of the *AWEA Small Wind Turbine Performance and Safety Standard*.

## C. Definitions

The following definitions have been adopted by SWCC for the identified terms used in this Policy.

1. Annual energy production. An estimate of the total energy production of a wind turbine during a one (1) year period as calculated by applying the measured power curve to a Rayleigh frequency distribution at a specified hub height annual average wind speed, assuming 100 % availability.
2. AWEA Standard. *AWEA Small Wind Turbine Performance and Safety Standard* (AWEA Standard 9.1 – 2009), hereinafter referred to as the AWEA Standard. The AWEA Standard incorporates, in part, the IEC 61400 series of Standards relevant to SWTs with regard to Power Performance (IEC Standard 61400-12-1), Acoustic Noise (IEC Standard 61400-11), and Design Requirements (IEC Standard 61400-2).
3. Peak Power. Highest bin-averaged power output of all filled wind speed bins per the power curve from IEC 61400-12-1, as modified by the AWEA Standard. Also termed “nameplate capacity”.
4. Qualified Testing Organization. A testing organization that is qualified under this Policy and applicable SWCC requirements to perform SWT testing for the purpose of certification. In order to receive SWCC Qualified Testing Organization status, the organization must demonstrate compliance with all relevant requirements of the AWEA Standard and ISO/IEC Standard 17025.

## D. Policy Abbreviations

1. AC: alternating current

2. AEP: annual energy production
3. AWEA: American Wind Energy Association
4. C<sub>p</sub>: power coefficient
5. ed: edition
6. HAWT: horizontal axis wind turbine
7. IEC: International Electrotechnical Commission
8. ISO: International Organization for Standardization
9. MCS: Microgeneration Certification Scheme
10. OTF: operational time fraction
11. SWT: small wind turbine
12. VAWT: vertical axis wind turbine

## **E. Certification Commission**

The Certification Commission (Commission) has been established by the SWCC Board of Directors to supervise the evaluation of turbines for SWCC Certification. The structure and composition of the Commission has been developed to ensure impartiality in all matters pertaining to its role.

The Commission is composed of three (3), qualified and independent industry experts appointed by the Board of Directors. The Commission has been delegated the authority to review and approve SWT certification applications in consultation with the Technical Director. Among other responsibilities, and consistent with this Policy, the Commission will: review each certification application and relevant supporting information under the applicable SWCC Certification standards, in consultation with the Technical Director; determine by majority vote whether each certification application is granted, conditionally granted, or rejected; determine whether each certification renewal application is granted, conditionally granted, or rejected; determine whether a Certification Holder must submit a new certification application when a product has been modified; initiate, review, and resolve all deficiency and violation matters under this Policy related to Certification Holders and Applicants, and determine whether to issue certification sanctions or other appropriate actions; require the submission of additional application renewal information when appropriate; and, review and determine the appropriateness of design changes related to certified SWTs.

## F. Certification Eligibility Requirements

1. General Policy Requirements. SWCC eligibility policies are administered in an objective and non-discriminatory manner, and SWCC provides certification services to any Applicant that satisfies the conditions in this Policy. SWCC will not impede or inhibit Applicant access to SWCC services in any unlawful or improper preferential manner.

SWCC makes its services accessible to all Applicants whose activities fall within its declared field of operation. All Application and Certification Fees will be applied uniformly to all Applicants. Access to SWCC certification is not conditioned on the Applicant's size, membership in any association or group, nor the number of certifications previously issued by SWCC.

2. Applicant Eligibility. SWCC Certification Applications may be submitted only by the holder of all ownership rights in and to the SWT (SWT Manufacturer), or the authorized designee of such SWT Manufacturer. If the Applicant is such an authorized designee, the Applicant must submit written proof of authorization from the SWT Manufacturer to seek SWCC certification. SWCC will have the sole and exclusive right to determine whether such a designee is properly authorized to seek SWCC certification.

If the Applicant is an authorized designee, the non-Applicant SWT Manufacturer will be required to accept and agree to comply with all terms of SWCC policies, including the SWCC Small Wind Turbine Certification Policy and the SWCC Trademark and Certification Mark Use Policy, prior to SWCC issuing SWT Certification.

3. Equipment Eligibility. Turbines eligible for SWCC Certification must meet the requirements defined in the AWEA Standard. This AWEA document is available to Applicants and the public on the SWCC website at: [www.smallwindcertification.org](http://www.smallwindcertification.org).

Eligible SWTs are defined as newly-manufactured, electricity-producing wind turbines with a swept area that is less than or equal to 200 m<sup>2</sup>. Previous versions of a SWT design that are no longer available to the market are not eligible for SWCC certification. Except as required by the AWEA Standard, towers and foundations are not part of the scope of SWCC Certification.

Applicants may submit one (1) Application for multiple SWT configurations of the same turbine type, provided that the SWTs are similar in design and other significant characteristics. In this regard, SWCC will make every reasonable effort to consolidate the testing requirements applicable under this Policy, based on SWCC's review of the information contained in an Applicant's Notice of Intent to Submit an Application. However, each SWT configuration will be issued a separate certification, provided all certification eligibility requirements are met.

4. Certification Eligibility. A turbine is eligible for certification if all of the following requirements are satisfied in full:
- a. The SWT is compliant with the AWEA Standard in all applicable respects;
  - b. The SWT has been tested properly by a Qualified Testing Organization consistent with this Policy and the AWEA Standard, and such tests demonstrate that the SWT is compliant with the AWEA Standard;
  - c. A structural design analysis of the SWT has been performed consistent with this Policy and the AWEA Standard, and such analysis demonstrates that the turbine is compliant with the AWEA Standard;
  - d. All other SWCC Certification requirements and conditions have been satisfied;
  - e. The Applicant has submitted a complete Notice of Intent to Submit an Application to SWCC;
  - f. The Applicant has signed a Certification Agreement with SWCC, which details the responsibilities of the Applicant and SWCC with respect to the certification application review process;
  - g. The Applicant has submitted a complete SWT Certification Application to SWCC;
  - h. The Applicant has submitted all additional information and materials required by the Certification Commission or the Technical Director;
  - i. The Applicant has submitted all required fees in full; and,
  - j. The Certification Commission has determined that the turbine is eligible for certification, and grants certification to the SWT.

5. Optional Limited Power Performance Certification.

- a. Upon request, and conditioned upon application for full SWCC certification, SWCC may grant Limited Power Performance (LPP) Certification to a SWT prior to granting full SWCC Certification. LPP Certification is time-limited and will be effective for a period of not more than eighteen (18) months. If full certification is not granted to the SWT by or before the end of this 18-month period, or the Applicant withdraws its SWCC certification application, the LPP Certification will terminate.
- b. In order for SWCC to evaluate the power performance of a SWT, the Applicant must submit a power performance test report to SWCC. A

technical review of the power performance test report will be conducted by the Certification Commission to verify conformance with the AWEA Standard.

- c. LPP Certification may be granted by SWCC where a SWT has completed a power performance test by a Qualified Testing Organization in accordance with AWEA Standard requirements. If testing is performed by a non-accredited Testing Organization, a Test Site Evaluation must be completed prior to granting LPP Certification.
- d. Once LPP Certification is granted, SWCC will publish a list of all SWTs that have been certified for power performance with test results and date that LPP Certification will start and terminate. Published test results include the power curve and table, AEP curve and table, AWEA Rated Annual Energy, and AWEA Rated Power and Peak Power.
- e. With respect to advertising and business materials, an Applicant whose SWT has been granted LPP Certification may represent that: the SWT's power performance rating is certified by SWCC; and/or, the SWT has been granted Limited Power Performance (LPP) Certification by SWCC. Applicants whose SWT have been granted this limited certification are not authorized to represent, give the impression, or otherwise suggest, that the SWT is fully certified by SWCC, i.e., that the SWT has received full SWCC certification.
- f. LPP Certification is an optional service offered to Applicants for an additional fee.

## **G. Certification Fees**

All SWCC Certification fees are established by the SWCC Board of Directors, or its authorized designee. The SWCC Certification Fee Schedule is provided in Policy Annex E. All current fees are subject to change. Fees may be paid by check or by wire transfer. Checks must be in U.S. funds drawn on a U.S. bank and payable to Small Wind Certification Council.

1. Preliminary Review Fee. A non-refundable fee paid by the Applicant with the Notice of Intent to Submit an Application. This fee satisfies all costs related to: an initial review of the SWT design and test plans concerning the SWT seeking certification; and, the development of the Certification Agreement(s).
2. Test Site Evaluation Fee. A non-refundable fee paid by the Applicant related to the on-site evaluation of a non-accredited testing organization; or the on-site evaluation and inspection of an accredited testing organization, if such an evaluation is deemed necessary by SWCC to fulfill the requirements of this

Policy (see Section I.2 and I.3). This fee will be invoiced to the Applicant and must be paid prior to scheduling the evaluation.

Any additional site evaluation expenses to be charged will be determined by SWCC based upon the actual costs incurred to complete the evaluation. Additional expenses related to site evaluation will be payable upon completion of the Test Site Evaluation. If the evaluation identifies deficiencies requiring corrective actions, additional fees will apply for any necessary SWCC reevaluation of the Applicant's completion of the corrective actions.

3. Test Site Travel Expenses. Non-refundable expenses paid by the Applicant related to the travel of SWCC representatives with respect to the Test Site Evaluation. Such expenses will be estimated in accordance with the SWCC Travel Policy and will be charged to the Applicant before the Test Site Evaluation has been scheduled. These expenses must be paid prior to scheduling the evaluation. Eligible travel expenses include:
  - a. Airfare;
  - b. Railroad fare;
  - c. Car rental and fuel;
  - d. Taxi and bus fare;
  - e. Parking;
  - f. Tolls;
  - g. Meals and incidental expenses per federal rates;
  - h. Person mileage at the federal rate; and,
  - i. Lodging.
4. Certification Application Fee. A non-refundable fee paid by the Applicant with the Certification Application. This fee satisfies the costs related to: the technical review of test and structural analysis reports; the resolution of application issues; Certification Commission application review; labeling; and, the publishing of SWT data.
5. Annual Certification Renewal Fee. A non-refundable fee paid by the Certification Holder with the required Annual Certification Report.
6. Limited Power Performance Certification Fee. A non-refundable fee paid by an Applicant seeking Limited Power Performance Certification for a SWT.

7. Reinstatement Fee. A non-refundable fee paid by an Applicant or Certification Holder seeking reinstatement pursuant to section O of this Policy.
8. Certification Reapplication Fee. A non-refundable fee paid by an Applicant submitting a Petition to Reapply for Certification pursuant to section O8 of this Policy.

## **H. Application Requirements and Actions**

In order to complete the SWCC Certification application process, each Applicant must submit the following completed application materials.

1. Notice of Intent to Submit an Application. An Applicant intending to seek SWCC Certification will first submit a Notice of Intent to Submit an Application (Notice of Intent). After receiving this Notice of Intent, SWCC will review the details of the SWT to be certified and the plans for testing. SWCC will use this information to determine the Certification Fee and develop a Certification Agreement. Guidelines for preparing the Notice of Intent are provided in Policy Annex B.

An SWCC Configuration Description Form will be included in the Application materials. This Form must be completed for each turbine seeking SWCC Certification and must be submitted with the Notice of Intent.

2. Certification Agreement with Applicant. After acceptance of the Notice of Intent by SWCC, the Applicant will sign an Agreement with SWCC, which provides detailed information concerning: the turbine to be certified; the test plans; and, the roles and responsibilities of each party. As part of this Agreement, the Applicant must agree to provide all design documents and raw data, or subsets of processed data (e.g., results for a particular date range), in a suitable format, if requested by SWCC. This Certification Agreement will be presented to the Applicant following the review of the Notice of Intent.
3. Testing Agreement with Testing Organization. Testing organizations that intend to perform testing for certification must sign a Testing Agreement with SWCC, which provides detailed information concerning: the turbine to be certified; the test plans; and, the roles and responsibilities of each party. The Testing Agreement will be presented to the Testing Organization after the Applicant has signed the Certification Agreement.
4. Certification Application. Once all eligibility conditions have been satisfied and all required testing and reporting have been completed, the Applicant will submit a complete Certification Application, including the final test report, to SWCC.
5. Publication of Application Status. In the Notice of Intent, an Applicant may request to have the status of the Application published on the SWCC website.

Following acceptance of the Certification Agreement, SWCC will publish on the SWCC website the Applicant's name, SWT model, and Application Status with the following status information:

"Under Contract" which indicates that the Applicant has executed a Certification Agreement with the SWCC;

"Under Test" which indicates that the SWT has been installed at the test site, commissioned, instrumented and is collecting data;

"Reports Submitted" which indicates that the Applicant has submitted a complete Test and Analysis Report to the SWCC with a Certification Application; or

*Note:* the date on which the Applicant has achieved each Application Status will be published on the SWCC website.

6. Inactive Status. Applications are classified as Active or Inactive according the criteria below. Active applications are eligible for completion and the award of a certification when all program requirements established by SWCC have been satisfied. Inactive applications have failed to adequately progress toward certification as established below, and require additional steps in order to be returned to Active status. A certification application shall be considered Inactive and removed from the SWCC website under the any one of the following conditions:

- a. The SWT has not yet achieved "Under Test" status after eighteen (18) months from the "Under Contract" date.
- b. The SWT has not yet achieved "Reports Submitted" status after two (2) years from the "Under Test" date.

Upon classification as Inactive, applications are removed from the list of Applicant Turbines posted on the SWCC website. The initial Notice of Intent (NOI) associated with applications that are classified as Inactive becomes invalid. To restore an application to Active status, a new Notice of Intent must be submitted for review along with payment of associated Preliminary Review and reinstatement fees. SWCC staff shall make a good faith effort to notify applicants whose application is nearing one or both of the Inactive status criteria above, using the latest applicant contact information on file with SWCC.

7. Certification Decision. SWCC will notify the Applicant of the Certification decision. If certification is not granted, SWCC will identify the reasons for the decision.

## I. Qualified Testing Organizations

Qualified Testing Organizations must satisfy, and comply with, all relevant requirements of ISO/IEC Standard 17025: *General Requirements for the Competence of Calibration and Testing Laboratories*. In order to be eligible as a Qualified Testing Organization, the testing organization must be either: accredited under ISO/IEC Standard 17025 by an authorized third-party accreditation body with a scope that covers the required testing; or, evaluated and approved by SWCC under the ISO/IEC Standard, and other relevant standards identified in this Section. The three (3) types of Qualified Testing Organizations, and the related requirements, are as follows:

1. Accredited Testing Organization. Test reports will be accepted for turbines tested by an organization accredited to ISO/IEC Standard 17025 by an authorized national or international accreditation body. The scope of the accreditation must include testing to at least one of the following:
  - a. The AWEA Standard;  
  
and/or,
  - b. The IEC Standard 61400-2 (Design), 61400-11 (Acoustics), and 61400-12-1 (Performance).

SWCC may conduct an on-site evaluation and inspection of the test facility and laboratory documentation to assure compliance with this policy and conformity with all standards referenced above.

2. Non-Accredited Testing Organization. For SWTs tested by a non-accredited testing organization, SWCC will perform an on-site audit of the test facility to determine suitability and competence, using ISO/IEC Standard 17025 as a guide. The audit will document conformance with the AWEA Standard, and will include:
  - a. An evaluation of the testing organization's quality assurance system using ISO/IEC Standard 17025 as a guide. This quality audit will involve SWCC review and verification of the organization's: staff; procedures; instruments; calibrations; signal quality to data acquisition system; data quality procedures; and/or, validated data analysis procedures; and,
  - b. An evaluation of the testing organization's test environment using the AWEA Standard as a guide. For power performance testing, this audit will include a review of the site assessment for obstacles and terrain per IEC Standard 61400-12-1.

If the testing organization fails to satisfy ISO/IEC Standard 17025 requirements, all testing performed on the SWT by that test facility, and all related test analysis reports, will be rejected by SWCC.

3. Manufacturer Testing. For turbines tested at a facility operated by the SWT Manufacturer, SWCC will conduct an on-site audit and evaluation for non-accredited testing organizations, consistent with the requirements of Policy Section I.2. In addition to the audit, the manufacturer must also agree to the following terms:
  - a. Unannounced facility site inspections by SWCC;
  - b. Periodic surveillance of data by SWCC; and,
  - c. Development, maintenance, and enforcement of facility policies and procedures ensuring that all key personnel involved in the SWT testing, and the collection and reporting of data related to the SWT tests, are impartial and free from any undue commercial, financial, and other pressures that might influence their technical and independent judgment. In order to satisfy this requirement, the SWCC Manufacturer/Applicant must either: adopt the procedures identified in Annex I of this Policy; or, submit its policies and procedures concerning this requirement to SWCC for review and approval. SWCC retains the sole authority to accept, reject, or require modification of such SWT Manufacturer policies.

If the test facility fails to satisfy relevant requirements of ISO/IEC Standard 17025 requirements, all testing performed on the SWT by that facility, and all related test analysis reports, will be rejected by SWCC.

## **J. Test and Analysis Report Requirements**

1. Test and Analysis Reports submitted to SWCC must clearly and specifically state how each requirement of the AWEA Standard has been met with respect to the SWT tested. The following information and elements must be included in the final Test and Analysis Report in the format required by SWCC.
  - a. Introduction. A brief summary of the turbine that was tested, including: serial number and control software revision; the date and location of testing; and, the standards and technical specifications that were followed.
  - b. Reference Documents. All documents used in the production of the Test and Analysis Report.
  - c. Summary Report. A summary report, which will be publicly available once a SWCC Certification has been granted, must include:
    1. Tabulated AEP (kWh) vs. hub height annual average wind speeds (m/s) at sea level air density;

2. AEP curve (kWh) vs. hub height annual average wind speeds (m/s) at sea level air density;
  3. Tabulated wind speed (m/s) and power data (kW) at sea level air density;
  4. Graph of Power (kW) vs. wind speed (m/s) at sea level air density;
  5. Measured sound pressure levels (per Section 9.4 of IEC 61400-11 ed.2);
  6. AWEA Rated Annual Energy @ 5 m/s;
  7. AWEA Rated Sound Level;
  8. AWEA Rated Power @ 11 m/s;
  9. Peak Power; and,
  10. Summary of the manufacturer's tower design requirements.
- d. Power Performance Test Report. The power performance test report must include:
1. Reporting requirements of Section 9 (Reporting Format) of IEC 61400-12-1, incorporating modifications in Section 2 of the AWEA Standard and Annex H of IEC 61400-12-1; and,
  2. A summary of the data analysis tool(s) utilized in this test. These tools shall be made available for an SWCC audit.
- e. Acoustic Test Report. The acoustic test report must include:
1. Reporting requirements of Section 9 (Information to be reported) of IEC 61400-11, incorporating modifications made in Section 3 of the AWEA Standard; and,
  2. Description of any obvious changes in sound at high wind speeds where overspeed protection becomes active;
  3. Characterization of any prominent tones observed during the test; and,
  4. A summary of the data analysis tool(s) utilized in this test. These tools shall be made available for an SWCC audit.

- f. Duration Test Report. The duration test report must include:
1. Test Start Date & Time;
  2. Test End Date & Time;
  3. Operational time fraction (OTF) (%);
  4. Monthly summary of the OTF (%);
  5. Explanation of any OTF classifications not clearly attributable to the conditions listed in Section 9.4.2.2 of IEC 61400-2 ed.2;
  6. Verification of reliable operation during the test period;
  7. Characterization of any tower vibrations observed during the test period;
  8. Verification that the tower used in the duration test complies with the tower design requirements provided by the manufacturer;
  9. SWT Class from Table 1 in IEC 61400-2;
  10. Total months of operation (at least 6 months);
  11. Total hours of power production in winds of any velocity (at least 2500 h);
  12. Total hours of power production in winds of  $1.2V_{ave}$  and above (at least 250 h);
  13. Total hours of power production in winds of  $1.8V_{ave}$  and above (at least 25 h);
  14. Total hours in winds of 15 m/s and above (at least 25 h);
  15. Average turbulence intensity at 15 m/s;
  16. Maximum instantaneous wind speed during the test (m/s); and.
  17. Power production degradation test results;
  18. Results of the post-test detailed inspection of the SWT, including pictures of findings; and,

19. A summary of the data analysis tool(s) utilized in this test. These tools shall be made available for an SWCC audit.
- g. Safety and Function Test Report. The safety and function test report must include:
1. Summary of the safety and function test per Section 9.6 of IEC 61400-2. Power control must be demonstrated by measured power and wind speed. Rotor speed control must be demonstrated by measured rotor speed and wind speed;
  2. Summary of additional safety evaluation per Section 4.3 of the AWEA Standard; and,
  3. All SWT manuals.
- h. Structural Analysis Report. The information required by this Report section concerns a structural analysis of the SWT outside of any turbine testing by a Qualified Testing Organization. The identified information must be submitted by the Applicant in the manner specified below.
1. A licensed Professional Engineer or Chartered Engineer shall be commissioned by the Applicant to perform an evaluation of the structural analysis of the SWT. The structural analysis report shall be provided in a format that enables SWCC to properly review the structural evaluation methods used. The engineer shall represent and confirm, by a stamped letter, that:
    - a. All required load cases were modeled using acceptable methods as described in the AWEA Standard; and,
    - b. The major components of the SWT were adequately designed, based on the results of the above-reference load modeling and per the requirements described in the AWEA Standard. Major components include the:
      1. blade root or blade connection point;
      2. main shaft;
      3. yaw axis (for HAWTs);
      4. connection to the tower or support structure; and,
      5. other components as required by SWCC following a review of the SWT design.

2. Dynamic Analysis. For single/dual speed SWT or any SWT that has exhibited tower dynamics problems during the duration test, the Applicant must provide an evaluation of potential dynamic interactions between turbine and tower, and must demonstrate that potentially harmful dynamic interactions will be avoided (e.g. a Campbell diagram for the major components of the SWT system and/or a dynamic behavior assessment per IEC 61400-2).
- i. Log Book. A dedicated log book must be maintained during the testing. This log book must be submitted to SWCC when applying for Certification.

## **K. Labeling and Certificate**

SWCC will prepare, and provide to Certification Holders, consumer product labels and certificates that are consistent with the AWEA Standard. Turbine ratings will be included on each SWCC Certificate and SWCC Consumer Product Label, consistent with the SWCC Certificate Format provided in Policy Annex A and the SWCC Consumer Product Label Format provided in Annex F.

## **L. Complaints and Disputes Related to SWT – Reporting and Records Requirement**

As a condition of SWCC certification and certification renewal, each Certification Holder is required to report to SWCC all complaints and disputes (complaint matters), including any legal, government, or other third party communications received by the Certification Holder, questioning or objecting to the performance, operations, quality, durability, components, safety, power, compliance with SWCC certification standards, or any other aspect of the SWT. Such complaint matters must be reported to SWCC within thirty (30) days of Certification Holder's knowledge of such matter.

With respect to this reporting requirement, the Certification Holder must submit to SWCC a Complaint Matter Reporting form, as provided in Policy Annex J, which includes the following information:

- Identification of the complaining party, if known;
- A description of the nature of the complaint matter; and,
- An explanation of the Certification Holder's response to the complaint matter, including any corrective actions taken, and the resolution of the matter.

In addition to these information requirements, the Certification Holder must submit to SWCC copies of: all written complaint matter communications; the Certification Holder's response to such complaint matter(s); any additional communications between

the complaining party, any involved government agency(ies), and the Certification Holder relating to the matter; and, the final resolution of the matter, if available.

SWCC will review all complaint matters related to the certified SWT in order to determine whether a Notice of Deficiency and Violation will be issued to the Certification Holder under Section O of this Policy.

## **M. Certification Renewal and Conditions**

1. Period of Certification Validity. SWCC Certification is valid during the certification period so long as all Certification Policy conditions are met. Among others, the Certification Holder must satisfy the following conditions:
  - a. The turbine has not been changed in any respect that significantly alters the original design approved in the SWCC Certification;
  - b. Changes to the turbine design have been reported to SWCC by the Certification Holder as required by this Policy and the Certification Commission. All complaint matters, field failures and malfunctions of the SWT have been reported to SWCC consistent with this Policy;
  - c. The Certification Holder is in compliance with all applicable SWCC policies, including the SWCC Trademark and Certification Mark Use Policy. All SWCC marks and labels have been used properly, and in a manner consistent with SWCC policies and AWEA Standard Section 7 (Labeling), which specifies the required use of the Rated Annual Energy, Power and Estimated Sound Level;
  - d. The Certification Holder has complied with the Complaint and Dispute requirements of Section L; and,
  - e. The Annual Certification Renewal Fee has been paid in full.
2. Certification Period. On or before the end of the certification period, SWCC will take one of the following actions:
  - a. Renew the turbine certification for an additional certification period if the Applicant meets the requirements in Sections M3 of this Policy.
  - b. Grant an extension of up to three (3) months for the certification period, if the renewal decision is not complete by the end of the certification period.
  - c. The Applicant voluntarily withdraws the turbine certification. The Certification Holder is not permitted to use any SWCC Certification Mark, certificates, labels, or reports, or make any representation concerning certification by, or affiliation with, SWCC with respect to the relevant SWT that has been

withdrawn from certification. SWCC will remove the SWT from certification lists and any other published information.

- d. Suspend or Revoke the Certification according to the requirements in Section O of this Policy.

When a decision is made to renew a turbine certification, the start date of the new certification period listed on the certificate shall be the renewal decision date. The end date of the certification period will remain the certification anniversary date.

### 3. Certification Renewal Requirements.

- a. Annual Certification Report. In order to maintain SWCC Certification, the Certification Holder is required to prepare and submit an Annual Certification Report to SWCC each year, at least 45 days before the anniversary of the date that the SWCC certification was issued. In order to be accepted, the Annual Certification Report must include a complete and accurate explanation of the following information:
  1. All abnormal operating experiences, equipment failures or malfunctions, and other problems related to the certified turbine;
  2. All modifications to the certified SWT, including all hardware and software changes; and,
  3. A summary list of all complaint matters identified in Section L of this Policy within the past twelve (12) months.

A sample Annual Certification Report Form is provided in Policy Annex G. The template provided in the Annex is for informational purposes only. A custom report form will be sent to the Applicant when Certification is granted.

The Technical Director will assess the Annual Certification Report information, and determine whether the Report satisfies the requirements of this Policy Section. If accepted, the Certification Holder will be notified of continued certification, and will receive an updated Certificate.

If the Technical Director identifies any concerns or anomalies related to the information in the Annual Certification Report, the matter will be referred to the Certification Commission, which will decide whether to accept the report and maintain certification for another year, or whether to require additional testing or other requirements in order to confirm the SWT's ongoing compliance and eligibility. If any SWT changes are deemed significant, then the Requirements of Section M.2.b below will

apply. These results will be communicated to the Certification Holder in writing.

- b. Significant SWT Modifications. In the event that a certified turbine is, or will be, modified in any significant respect, the Certification Holder must report such modification to SWCC in a timely and accurate manner, no more than thirty (30) days after such SWT design changes have occurred.

The Certification Holder is required to consult with the Technical Director to determine whether a product change is minor or significant. Thereafter, the Technical Director will consult with the Certification Commission to determine whether there is a material deviation from the initial certified turbine design that may significantly affect durability, function, or performance. Once SWCC determines whether a significant modification to the certified SWT has been proposed, SWCC may: require more information regarding the change; require a design analysis or partial design analysis; require re-testing or partial re-testing; require re-certification of the turbine; or, determine that the change is minor and no action is required. The Certification Holder must provide all required information and documentation to SWCC.

A sample Significant Modification Report Form is provided in Policy Annex H. The template provided in the Annex is for informational purposes only. A custom form will be sent to the Applicant when SWCC Certification is granted.

- c. Annual Certification Renewal Fee. Payment of the Annual Certification Renewal Fee is required to maintain certification. In the event the information reported in the Annual Certification Report or the Significant Modification Report requires additional SWCC work or review, the Certification Holder will be charged separately for such SWCC costs and expenses, consistent with the applicable SWCC fee schedule.
4. Change in Ownership of WT. If ownership rights in and to the SWT changes, or the Certification Holder identified in the SWCC SWT Performance Certificate no longer has any rights in or to the certified SWT, a new SWCC Certification Agreement must be accepted by the new owner of the SWT to maintain the SWCC Certification, or the certification will terminate. A fee will be charged to complete transfer of SWCC certification.

## **N. Confidentiality of Applications/Conflict of Interest**

1. Application Confidentiality. Certification Applications, and the information contained therein, will be treated as confidential material by SWCC. The review of Applications by SWCC staff, consultants, and Certification Commissioners will be confidential and conducted in private meetings. Prior to a certification

determination and upon request by the Applicant, SWCC will publish the Applicant's name, SWT model, and Application Status, pursuant to Policy Section H.5. All other Application information will remain confidential until a certification determination has been issued by SWCC.

Once certification is granted, the following materials will be made available to the public: a Summary Report, as described in Policy Section J.1.c; the SWCC Certificate, consistent with Policy Annex A; and, the SWCC Consumer Product Label, consistent with Policy Annex F. All other turbine information will remain confidential.

2. Conflict of Interest. All SWCC representatives are required to disclose to the Certification Commission any potential conflict of interest related to a pending SWT Certification Application to the SWCC Executive Director, consistent with SWCC conflict of interest policies and agreements.

## **O. Certification Deficiency and Policy Violation Resolution Process**

SWCC will review and resolve all matters involving: a potential failure of the Certification Holder to satisfy a requirement of this Policy; a complaint or similar communication received by the Certification Holder or SWCC concerning the SWT; and, any other dispute related to SWCC policies.

1. Notice of Potential Certification Deficiency or Policy Violation.

The Certification Commission will issue a Notice of Deficiency and/or Notice of Policy Violation (Notice) to a Certification Holder where the Commission has determined that:

- a. the Certification Holder may have violated any requirement of this Policy; or,
  - b. a deficiency may exist with respect to the Certification Holder's SWCC certification.
2. Required Response to Deficiency Notice. Within thirty (30) days of receipt of such Notice, the Certification Holder must: respond to each identified deficiency and/or Policy violation; provide all relevant information and materials; and, otherwise satisfy all requirements set forth in the Notice. Following the timely submission of a complete and accurate response to the Notice, all deficiency and violation matters will be resolved by the Certification Commission pursuant to this Policy Section.
  3. Failure to Respond. In the event that the Certification Holder does not provide a timely, complete, and accurate response to a Notice, the Certification Commission may issue any sanction(s) or corrective action(s) authorized by this Policy, or any other applicable SWCC Policy. The Certification Holder must

comply fully with all sanctions and/or corrective actions issued by the Commission.

4. Grounds for Sanction and Corrective Actions. The circumstances under which the Certification Commission may issue certification sanctions and/or corrective actions include, but are not limited to, the following:
  - a. The Certification Holder has failed to satisfy an SWCC Policy requirement with respect to the Certification Holder's SWCC certification;
  - b. The Certificate holder makes a material misrepresentation to SWCC;
  - c. The Certification Holder makes a public misrepresentation concerning its activities, operations, or a tested product;
  - d. The Certification Holder fails to comply with a condition of the certification;
  - e. The Certification Holder violates, or acts contrary to, an SWCC Policy;
  - f. The Certification Holder fails to remit required certification fees and charges to SWCC;
  - g. Other good and reasonable cause exists and supports the issuance of sanctions or corrective actions under this Policy.
  
5. Certification Deficiency and Policy Violation Decisions. Based on an objective and complete review of the information received, the Certification Commission, in its sole discretion, will determine whether a certification deficiency or Policy violation exists, or whether to dismiss the Notice. Upon the finding of any such deficiency or violation, the Certification Commission will determine the severity of such deficiency(ies) or violation(s), and issue a Deficiency and/or Violation Decision. In its sole discretion, the Commission may issue one or more of the following actions:
  - a. Private or Public Reprimand.
  - b. Conditions of Continued Certification.
  - c. Certification Probation. The term of certification probation will be for a period of up to six (6) months. Certification probation status will not be published on the SWCC website. During the period of SWCC certification probation, the SWCC certification remains in effect.
  - d. Certification Suspension. The term of a certification suspension will be for a period of at least six (6) months, and a maximum of thirty-six (36) months. Notice of certification suspension will be published on the SWCC

website. During the period of SWCC certification suspension, the Certification Holder is not permitted to use any SWCC Certification Mark or make any representation concerning certification by, or affiliation with, SWCC with respect to the relevant SWT that is the subject of the deficiency or Policy violation. In addition, the Certification Commission may require that the Certification Holder perform certain, appropriate corrective actions related to the suspension.

- e. Certification Revocation. Upon certification revocation, all rights of the Certification Holder to SWCC Certification will terminate in all respects, and the SWT will be removed from the listing of SWCC certified turbines on the SWCC website. Notice of certification revocation will be published on the SWCC website. The Certification Holder is not permitted to use any SWCC Certification Mark, or make any representation concerning certification by, or affiliation with, SWCC with respect to the SWT that is the subject of the deficiency or Policy violation.
6. Probation Order/Reinstatement. Following the expiration of a final Certification Probation Decision and Order issued under Policy Section O.5.c, the Certification Commission will do the following: if the Certification Holder has satisfied the terms of probation in full, verify that the probation has been completed and reinstate the Certification Holder to full certification status; or, if the Certification Holder has not satisfied the terms of probation in full, determine whether the probation order will continue, and/or issue additional, appropriate sanctions or actions. A reinstatement fee may apply for any necessary SWCC evaluation of the Applicant's completion of the corrective actions and processing of reinstatement, consistent with the Certification Fee Schedule.
  7. Suspension Order/Reinstatement Request. After the expiration of a final Certification Suspension Decision and Order issued under Policy Section O.5.d, the Certification Holder may submit a Request for Reinstatement (Reinstatement Request) to the SWCC Executive Director for review by the Certification Commission.
    - a. Contents of Reinstatement Request. The Reinstatement Request must include the following information: a statement of the reasons that the Certification Holder believes support or justify the acceptance of the Reinstatement Request; and, copies of any relevant materials which support the Request. The Certification Commission may require any additional information or documents related to its review of the Reinstatement Request. A reinstatement fee may apply for any necessary SWCC evaluation of the Applicant's completion of the corrective actions and processing of reinstatement, consistent with the Certification Fee Schedule.

- b. Certification Reinstatement Decision. Within thirty (30) days of the conclusion of its review of a Reinstatement Request, or as soon as practical, the Certification Commission will prepare and issue a written Reinstatement Decision and Order explaining its decision with respect to the Request. The final Decision and Order will indicate: whether the Reinstatement Request is granted, denied, or continued to a later date; whether all certification deficiencies and Policy violations identified in the Deficiency and/or Violation Decision have been appropriately remedied and resolved; or, whether additional deficiencies or Policy violations exist justifying the continuation of the Suspension Order, and/or issuance of additional certification actions. If appropriate, the Decision and Order will indicate any conditions of SWCC certification.
  
8. Revocation Order/Reapplication Petition. Two (2) years after the date of a final Certification Revocation Decision and Order issued under Policy Section O.5.e, the SWT Manufacturer, or its authorized designee, may submit a Petition to Reapply for Certification (Reapplication Petition) to the SWCC Executive Director for review by the Certification Commission.
  - a. Contents of Reapplication Petition. The Reapplication Petition must include the following information: a statement of the reasons that support or justify the acceptance of the Reapplication Petition, copies of any relevant materials which support the Petition, and the Certification Reapplication Fee. The Certification Commission may require any additional information or documents related to its review of the Reapplication Petition.
  
  - b. Certification Reapplication Decision. Within thirty (30) days of the conclusion of its review of a Reapplication Petition, or as soon as practical, the Certification Commission will prepare and issue a written Reapplication Decision and Order explaining whether the Petition is accepted, denied, or continued to a later date. If the Reapplication Petition is accepted, then the SWT Manufacturer, or its authorized designee, may submit a new Notice of Intent to Submit an Application for SWCC Certification.

## **P. Deficiency and Violation Decision Appeals**

A Certification Holder may appeal an adverse Certification Deficiency or Policy Violation Decision, or any part thereof, to the SWCC Appeals Committee, pursuant to the terms of the SWCC Certification Appeal Policy.

## **Q. Voluntary Termination**

A Certification Holder may elect to voluntarily terminate its SWCC Certification by submitting a written request for certification termination to SWCC. Should a Certification Holder attempt to voluntarily terminate SWCC certification during the course of any complaint, dispute, or deficiency review, SWCC reserves the exclusive right to continue the matter to a final resolution, consistent with this Policy. In its sole discretion, SWCC may require that a Certification Holder agree to certain terms and conditions related to the voluntary termination of SWCC certification.

Upon SWCC's acceptance of a voluntary termination request, the Certification Agreement with SWCC will be terminated, the SWT will be removed from the listing of SWCC certified turbines on the SWCC website, and notice of the voluntary certification termination will be published on the SWCC website. The Certification Holder is no longer authorized to use the SWCC Certification Mark(s) and consumer product labels, and may not make any representations concerning certification by, or affiliation with, SWCC with respect to the SWT that is the subject of the certification termination.

## Annex A: SWCC Certificate Format

*To be made publicly available once a SWCC Certification has been granted*



**CERTIFIED**  
SMALL WIND TURBINE  
Conforms to AWEA 9.1 - 2009  
SWCC-XX-XX

This Certificate is issued to:

**XXXX**  
Street  
City  
Country

For the wind turbine:

**XXXX**

This Certificate represents that the above-identified Small Wind Turbine (SWT) is in conformance with the AWEA *Small Wind Turbine Performance and Safety Standard* (AWEA Standard 9.1 – 2009).

Changes to the Small Wind Turbine system design are to be approved by SWCC. If changes are made to the SWT without approval, this Certificate is not valid and is not in effect.

The wind turbine specifications relevant to this Certificate are provided on the following page.

This Certificate is valid from [Date] to [Date]. Certification must be renewed annually.

Signature

\_\_\_\_\_  
SWCC Executive Director for the Certification Commission

\_\_\_\_\_  
Date

## SWCC Certificate, Page 2

### Wind Turbine Specifications:

#### Turbine parameters

Manufacturer.....  
Model.....  
Power Form .....  
Rotor Diameter ..... [m]  
Rotor Swept Area ..... [m<sup>2</sup>]  
Cut-In Wind Speed..... [m/s]  
Cut-Out Wind Speed..... [m/s]  
Maximum Power ..... [kW]  
Maximum Voltage ..... [V]  
Maximum Current(s) ..... [A]

#### Turbine Ratings

AWEA Rated Annual Energy ..... [kWh]  
AWEA Rated Sound Level..... [dB(A)]  
AWEA Rated Power..... [kW @ 11 m/s]  
Peak Power (Nameplate Capacity) ..... [kW @ m/s]

#### Design and Duration

Turbine design and duration test comply with IEC SWT class XX for average wind speeds ( $V_{ave}$ ) of X.X m/s and reference wind speeds ( $V_{ref}$ ) of X.X m/s.

Small Wind Certification Council (SWCC)  
56 Clifton Country Road, Suite 202  
Clifton Park, NY 12065  
[www.smallwindcertification.org](http://www.smallwindcertification.org)

# Annex B: Notice of Intent to Submit an Application Format



## Notice of Intent to Submit an Application for SWCC Certification

Please submit this form and all attachments electronically to the e-mail address below. If necessary, send a hard copy of this form with payment of the Preliminary Review Fee to the mailing address below:

To: Small Wind Certification Council  
56 Clifton Country Road, Suite 202  
Clifton Park, NY 12065  
[info@smallwindcertification.org](mailto:info@smallwindcertification.org)

Please use the legal corporate or other business name for the Company and the official corporate address.

Date (mm/dd/yyyy) \_\_\_\_\_

Applicant Name \_\_\_\_\_

Company \_\_\_\_\_

Description of Legal Status \_\_\_\_\_  
(e.g. LLC organized in the State of xxxxx)

Website \_\_\_\_\_

Address 1 \_\_\_\_\_

Address 2 \_\_\_\_\_

City, State, Zip, Country \_\_\_\_\_

Email \_\_\_\_\_

Phone 1 \_\_\_\_\_

Phone 2 \_\_\_\_\_

Re: **Notice of Intent to Submit an Application for SWCC Certification**

The Applicant identified above represents the following:

1. The Applicant is the designer and/or manufacturer of the SWT, or the authorized designee of the designer/manufacturer. **Please indicate the Applicant type below:**
  - Holder of all ownership rights in and to the SWT (SWT Manufacturer)
  - Authorized Designee of the SWT Manufacturer (include written proof of authorization with this application)
2. The rotor swept area is **200 m<sup>2</sup> or less.**
3. The Applicant has:
  - ✓ Received and accepted the SWCC Small Wind Turbine Certification Policy;
  - ✓ Received and accepted the AWEA *Small Wind Turbine Performance and Safety Standard*;
  - ✓ Received and accepted the necessary IEC 61400 Standards referenced within the AWEA Standard, including IEC 61400-2; and,
  - ✓ Included the SWCC **Preliminary Review Fee.**

By signing below, the authorized representative of the applicant confirms and agrees that all of the information contained in this Notice of Intent is true and accurate.

---

**Applicant Signature** - Applicant agrees to the above representations

**Preliminary review fee**

- Notice of Intent to Submit an Application for one (1) SWT **US\$ 2500**
- For each additional SWT submitted when multiple SWT configurations of the same turbine type are included in the Notice of Intent, provided that SWCC confirms that the SWTs are similar in design and other significant characteristics. **US\$ 1250**
- Fees may be paid by check or by wire transfer. Checks must be in U.S. funds drawn on a U.S. bank and payable to Small Wind Certification Council. Contact SWCC for wire instructions.

Turbine information. Please provide the following information for each turbine to be certified:

Model: \_\_\_\_\_  
Rotor: \_\_\_\_\_  
Rotor diameter (m): \_\_\_\_\_  
Swept area (m<sup>2</sup>): \_\_\_\_\_  
Power form \_\_\_\_\_ (e.g. 240VAC, 60Hz, 1-phase)

*(Please complete the **SWCC Configuration Description Form** for each turbine)*

Testing and evaluation plans. Please describe the Qualified Testing Organization that will be testing the turbine(s) to be certified:

Testing organization: \_\_\_\_\_  
Address: \_\_\_\_\_  
Contact: \_\_\_\_\_  
Phone: \_\_\_\_\_  
Website: \_\_\_\_\_  
Email: \_\_\_\_\_

**Publication of Application Status.**

The Applicant may request that SWCC publicly list the status of the SWCC Certification Application on the SWCC website, pursuant to Section H.3 of the SWCC Certification Policy.

**Please check one box below:**

- Yes, I authorize SWCC to publicly list the Applicant's name, SWT model and Application Status on the SWCC website.
- No, I would like the Applicant's name, SWT model and Application Status to remain confidential as we pursue certification.

While SWCC makes a significant effort to maintain current and accurate applicant directory information on the SWCC website, SWCC does not warrant or guarantee the accuracy, timeliness, or fitness of the information contained therein for any purpose.

## Annex C: Certification Process Summary

The following is an informative summary of the SWCC Certification process.

1. Applicant will acquire from the SWCC website:
  - a. The **SWCC Small Wind Turbine Certification Policy**;
  - b. The **AWEA Standard**;
  - c. The **Notice of Intent to Submit an Application form**; and,
  - d. The **SWCC Configuration Description form**.
2. SWCC will receive a Notice of Intent to Submit an Application (Notice of Intent) along with the SWCC Configuration Description Form and Preliminary Review Fee
3. SWCC will evaluate Applicant's Notice of Intent to determine detailed plans for testing and analysis, and will communicate with the Applicant and Testing Organization as required.
4. Applicant will sign a Certification Agreement with SWCC, which details the turbine to be certified, the test plans, the requirements of the structural analysis, and the Certification Fees.
5. If the Applicant chooses to authorize SWCC to publicly list the Applicant's name, SWT model and Application Status, such information will be published on the SWCC website.
6. Testing organization will sign an Agreement with SWCC, agreeing to perform appropriate tests on the turbine to be certified, and agreeing to the test plans and SWCC test site evaluation.
7. After testing, analysis, and reporting are complete, Applicant must submit to SWCC:
  - a. A complete Certification Application (an Application form will be provided by the SWCC);
  - b. Final testing and structural design analysis report(s); and,
  - c. The Certification Fee (determined after a review of the Notice of Intent; this fee varies depending on the particular details of the turbine and test plans).

8. SWCC Technical Director and other experts as needed, will evaluate Application materials, test reports, and the structural design analysis report, and communicate with the Applicant and testing organization to resolve issues.
9. Technical Director will send a technical evaluation report to the Certification Commission, documenting the technical evaluation results for the Certification Commission.
10. Certification Commission will review the Technical Director report, and determine whether the Certification Application is granted or rejected.
11. SWCC will grant certification to the SWT, or issue a rejection of the Certification Application describing the reasons for such determination.
12. If certification is granted, SWCC will prepare a Certificate signed by the SWCC Executive Director, a Summary Report and a Consumer Label for publication on the SWCC Internet site and distribution by the Certification Holder.

## Annex D: References

The following documents were used in the creation of, or are referenced within, this Policy.

1. AWEA *Small Wind Turbine Performance and Safety Standard* (AWEA Standard 9.1 – 2009)
2. IEC 61400-2 (2006): *Wind Turbines – Part 2: Design requirements of small wind turbines*
3. IEC 61400-2 (2013): *Wind Turbines – Part 2: Small wind turbines*
4. IEC 61400-12-1 (2005): *Wind Turbines – Part 12-1: Power performance measurements of electricity producing wind turbines*
5. IEC 61400-11 (2006): *Wind turbine generator systems - Part 11: Acoustic noise measurement techniques.*
6. IEC 61400-11 (2012): *Wind turbines - Part 11: Acoustic noise measurement techniques.*
7. IEC 61400-22 (2010): *Wind turbines - Part 22: Conformity testing and certification*
8. ISO/IEC 17025 (2005): *General requirements for the competence of calibration and testing laboratories*
9. ISO/IEC 17065 (2012): *Conformity assessment -- Requirements for bodies certifying products, processes and services*

## Annex E: Certification Fee Schedule

All fees are non-refundable. Section G of this Policy defines each Certification fee in detail.

Payments may be made by check or by wire transfer. Payments made by check must be in U.S. funds drawn on a U.S. bank and payable to Small Wind Certification Council. If you wish to wire funds, please contact SWCC for wire instructions.

### Preliminary review fee

- Notice of Intent to Submit an Application for one (1) SWT      US\$ 2500
- For each additional SWT submitted when multiple      US\$ 1250  
 SWT configurations of the same turbine type are  
 included in the Notice of Intent, provided that SWCC  
 confirms that the SWTs are similar in design and  
 other significant characteristics.

Test site evaluation fee      Varies

Certification application fee      Varies

Annual certification renewal fee      US\$ 2000

Annual Review Services related to Annual Certification Report      Varies

Limited Power Performance Certification Fee      Varies

Reinstatement Fee      Varies

Certification Reapplication Fee      Varies

## Annex F: SWCC Consumer Product Label Format

### Small Wind Certification Council

#### Certified Small Wind Turbine

Manufacturer/Model

**Sample Windpower Company**

**SWT (240 VAC, 1-phase, 60 Hz)**



**CERTIFIED**  
SMALL WIND TURBINE  
Conforms to AWEA 9.1 - 2009  
SWCC-XX-XX

#### **Rated Annual Energy**

Estimated annual energy production assuming an annual average wind speed of 5 m/s (11.2 mph), a Rayleigh wind speed distribution, sea-level air density and 100% availability. Actual production will vary depending on site conditions.

**12,300**

kWh/year

#### **Rated Sound Level**

The sound level that will not be exceeded 95% of the time, assuming an annual average wind speed of 5 m/s (11.2 mph), a Rayleigh wind speed distribution, sea-level air density, 100% availability and an observer location 60 m (~ 200 ft) from the rotor center.

**45.0**

dB(A)

#### **Rated Power**

The wind turbine power output at 11 m/s (24.6 mph) at standard sea-level conditions.

**12**

kW

Certified to be in Conformance with:  
**AWEA Standard 9.1 – 2009**

For a summary report and SWCC Certificate visit:

[www.smallwindcertification.org](http://www.smallwindcertification.org)

## Annex G: Annual Certification Report Form

*This template is for informational purposes only. A custom form will be sent to the Applicant when Certification is granted.*

### SWCC Annual Certification Report Form



According to Section M.2.a of the SWCC Small Wind Turbine Certification Policy, the Certification Holder shall prepare and submit this Annual Certification Report to SWCC on or before the anniversary of each SWCC certification each year. To allow time for processing the renewal, please submit this report forty-five (45) days prior to the certification anniversary date.

Section M.2.c of the SWCC Small Wind Turbine Certification Policy states that in the event the information reported in the Annual Certification Report requires additional SWCC work or review, the Certification Holder will be charged separately for such SWCC costs and expenses, consistent with the applicable SWCC fee schedule.

Date (mm/dd/yyyy): \_\_\_\_\_

Certification Holder: \_\_\_\_\_

Turbine Model: \_\_\_\_\_

SWCC Certification Number (SWCC-XX-XX): \_\_\_\_\_

Issue date of SWCC Certification (mm/dd/yyyy): \_\_\_\_\_

Renewal date (mm/dd/yyyy): \_\_\_\_\_

<b>Report all abnormal operating experiences, equipment failures, and other problems related to the certified SWT:</b>
<b>Report all complaints made known to supplier relating to the turbines compliance with the AWEA Standard.</b>
<b>All modifications to the certified SWT, including all hardware and software changes:</b>

## Annex H: Significant Modification Report Form

*This template is for informational purposes only. A custom form will be sent to the Applicant when Certification is granted.*

### SWCC Significant Modification Report Form

According to Section M.2.b of the SWCC Small Wind Turbine Certification Policy, in the event that a certified turbine is, or will be, modified in any significant respect, the Certification Holder must report such modification to SWCC in a timely and accurate manner, no more than thirty (30) days after such SWT design changes have occurred. Please refer to Section M.2.b of the Policy for guidance on defining a Significant Modification.



Date (mm/dd/yyyy): \_\_\_\_\_

Certification Holder: \_\_\_\_\_

Turbine Model: \_\_\_\_\_

SWCC Certification Number (SWCC-XX-XX): \_\_\_\_\_

Issue date of SWCC Certification (mm/dd/yyyy): \_\_\_\_\_

**Please report all planned Significant Modifications to the design of the certified wind turbine. Also include a rationale explaining how the changes may or may not affect the validity of the Certification.**

## **Annex I: Policy and Procedures Concerning Independence and Impartiality of Testing Personnel**

### **A. Introduction and Purpose**

Testing laboratories and facilities (test facilities) operated by SWT Manufacturers seeking SWCC certification of its product(s) must ensure that key personnel involved in the testing of SWTs (testing personnel), and the reporting of SWT test data, are impartial and free from any undue commercial, financial, and other pressures that might influence their technical and independent judgment. To that end, all test facilities must establish policies and procedures which: identify possible or actual influences which may create a conflict or undue influence on testing personnel; and, identify rules to prevent or limit such influences on those involved in the testing of SWTs and related activities.

The purpose of such policies and procedures is to ensure confidence in the test facility's competence, impartiality, judgment, and operational integrity.

### **B. Internal and External Influence**

A test facility must ensure that all owners, managers, and employees, contractors, and other third parties do not influence, or otherwise affect the validity or impartiality of, the activities and judgment of testing personnel. In order to accomplish this, the test facility must implement and satisfy the following procedures and requirements:

1. Test facility personnel involved in the design, development, and manufacture of the turbine are clearly identified in the related project report and documentation;

AND

2. When conducting tests and collecting data concerning a turbine, the test facility will only assign and use testing personnel who were not, and will not be, involved in the design, development, or manufacture of that turbine, and who are otherwise competent and qualified to perform such testing and data collection activities (approved testing personnel);

OR

In the SWT Manufacturer is unable to identify appropriate testing personnel under this Policy, and intends to use other personnel or contractors who do not qualify for approved testing personnel status, the test facility must:

- a. Ensure that appropriate training concerning potential conflicts and undue influence is provided to such test facility personnel or contractors; and,

- b. Engage a qualified, independent third party evaluator to review and approve all test results and underlying data, and to confirm, modify, or reject such results and data.

### **C. Training of Testing Personnel/Activity Prohibitions**

The test facility is responsible for ensuring that its testing personnel understand the importance of maintaining the competence, integrity, judgment, and operations integrity of the facility and related testing activities. In this regard, the test facility must take appropriate steps to ensure that its testing personnel not act in any manner, or engage in any activities, that may influence his/her independent judgment, or otherwise cast doubt upon its testing activities or the validity of test results or reports, including personnel training and the required disclosure of any involvement in any activities, organizations, or businesses that may relate to the interests or activities of the test facility.

## Annex J: Complaint Matter Reporting Form

*This template is for informational purposes only. A custom form will be sent to the Applicant when Certification is granted.*

### Complaint Matter Reporting Form



According to Section L of the SWCC Small Wind Turbine Certification Policy, each Certification Holder is required to report to SWCC all complaints and disputes (complaint matters). Please refer to Section L of the Policy for more information on Complaint Matters Reporting.

Date (mm/dd/yyyy): \_\_\_\_\_

Certification Holder: \_\_\_\_\_

Turbine Model: \_\_\_\_\_

SWCC Certification Number (SWCC-XX-XX): \_\_\_\_\_

Issue date of SWCC Certification (mm/dd/yyyy): \_\_\_\_\_

**Please use this form to report all Complain Matters to SWCC:**

Complaining Party	Nature of Complaint	Response to Complaint