# Wind Turbine Specifications Checklist

Proponents of proposed wind facilities should use the following checklist template when submitting a wind turbine specifications report in their Renewable Energy Approval (REA) application. The purpose of this checklist is to guide proponents when completing the wind turbine specifications report to ensure that all necessary information is included. It also helps the ministry document the wind turbine specifications.

The following information that **must** be included:

| **Specifics** | **Details** |
| --- | --- |
| **Wind Turbine Information** |  |
| Manufacturer |  |
| Model |  |
| Hub Height (m) |  |
| **Operating Information** |  |
| Speed regulation | ☐Passive Stall ☐Active Stall ☐ Pitch Control ☐Constant ☐ Variable |
| Rotational Speeds for each wind speed bin | ☐ At 4 m/s: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ rpm |
| Rotational Speeds for each wind speed bin | ☐ At 5 m/s: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ rpm |
| Rotational Speeds for each wind speed bin | ☐ At 6 m/s: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ rpm |
| Rotational Speeds for each wind speed bin | ☐ At 7 m/s: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ rpm |
| Rotational Speeds for each wind speed bin | ☐ At 8 m/s: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ rpm |
| Rotational Speeds for each wind speed bin | ☐ At 9 m/s: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ rpm |
| Rotational Speeds for each wind speed bin | ☐ At 10 m/s: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ rpm |
| Version Software for control of wind turbine |  |
| **Rotor Information** |  |
| Type (Default is a 3 blade, horizontal, upwind turbine) |  |
| Horizontal Distance from rotor centre to tower axis (m) |  |
| Diameter of Rotor (m) |  |
| Rotor Control Devices |  |
| Blade Modifications | ☐ Vortex Generators☐ Stall Strips☐ Trailing Edge Serrations/DinoTails☐ Other: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Blade Length (m) |  |
| **Gearbox Information** |  |
| Type | ☐ Direct Drive ☐ Geared Wind Turbine |
| Manufacturer |  |
| Model Number |  |
| **Generator Information** |  |
| Manufacturer |  |
| Model Number |  |
| Nominal Power (MW) |  |
| **Sound Data for tested wind turbine** |  |
| Overall sound power level IEC61400-11 test at 10 m height | ☐ At 4 m/s: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ dBA |
| Overall sound power level IEC61400-11 test at 10 m height | ☐ At 5 m/s: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ dBA |
| Overall sound power level IEC61400-11 test at 10 m height | ☐ At 6 m/s: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ dBA |
| Overall sound power level IEC61400-11 test at 10 m height | ☐ At 7 m/s: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ dBA |
| Overall sound power level IEC61400-11 test at 10 m height | ☐ At 8 m/s: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ dBA |
| Overall sound power level IEC61400-11 test at 10 m height | ☐ At 9 m/s: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ dBA |
| Overall sound power level IEC61400-11 test at 10 m height | ☐ At 10 m/s: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ dBA |
| Measurement Uncertainty (dB) |  |
| Grid Terminal Frequency of Tester | ☐50 Hz ☐ 60 Hz |

The following information that **should** be included:

| **Specifics** | **Details** |
| --- | --- |
| **Operating Information** |  |
| Swept Area (m2) |  |
| Rated Power Output (MW) |  |
| Aerodynamic Brakes | ☐Yes ☐ No |
| Cut-in Wind Speed (m/s) |  |
| Cut-out Wind Speed (m/s) |  |
| Nominal Power Wind Speed (m/s) |  |
| **Rotor Information** |  |
| Aerodynamic Profile of Blade |  |
| **Sound Data for tested wind turbine** |  |
| Maximum tonal audibility (dB) |  |

Proponents should also provide a Power Curve for each wind turbine proposed for the project.