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**ANNUAL REPORT TEMPLATE FOR WINDFARM PROJECTS  
 (PRE 2)**

**Project Title:** Tararua Wind Farm – Stage III  
**Description of Project:** Wind Farm located in Tararua ranges consisting of 31 Vestas V90 – 3MW turbines.  
**Company:** TrustPower Limited  
**Year Reported on:** 2011

**(1) Break down and total of emissions generated during construction using the emission factors listed in Schedule 2 (if applicable to the year being reported on).**

<b>CONSTRUCTION EMISSIONS</b>			
<b>Element</b>	<b>Usage</b>	<b>Embodied emission factors</b>	<b>tCO<sub>2</sub>-e</b>
Diesel	0	0.00271 tonnes CO <sub>2</sub> -e per litre	
Petrol	0	0.00232 tonnes CO <sub>2</sub> -e per litre	
Iron/Steel – produced in New Zealand	0	2.01 tonnes CO <sub>2</sub> -e per tonne	
Aluminium – produced in New Zealand	0	1.62 tonnes CO <sub>2</sub> -e per tonne	
Cement	0	0.46 tonnes CO <sub>2</sub> -e per tonne	
			<b>Total 0</b>

**(2) Break down and total of emissions from the operation of your project, once emission reductions have commenced.**

<b>Element</b>	<b>Annual Usage</b>	<b>Factor</b>	<b>tCO<sub>2</sub>-e</b>
Diesel	Negligible	0.00271 tonnes CO <sub>2</sub> -e per litre	
Petrol	Negligible	0.00232 tonnes CO <sub>2</sub> -e per litre	
Iron/Steel – produced in New Zealand		2.01 tonnes CO <sub>2</sub> -e per tonne	
Aluminium – produced in New Zealand		1.62 tonnes CO <sub>2</sub> -e per tonne	
Cement		0.46 tonnes CO <sub>2</sub> -e per tonne	
			<b>Total 0</b>

*Reminder: Emission Reductions cannot exist until after the requirements of clause 4.4 of the Project Agreement have been met.*

**(3) A record of the amount of electricity exported by the Project during the year.** (How this is to be metered and recorded is listed in Schedule 2 of the Project Agreement).

The following table records the exported generation of the Total wind farm (A). The NZWF export (B) is identified and separated from the total wind farm export, to give the Tararua III gross export volume.

Revenue Meter	kWh	OR	Turbine Identifier	kWh
(A) - Total Wind Farm Export (Tararua III and NZWF, from TP DA letter)	415,929,068			
(B) - NZWF Export (From EMS DA letter)	103,963,950			
<b>Tararua III Gross Export = A - B</b>	311,965,118			
<b>Total Electricity Exported or Generated (GWh)</b>	<b>311.965 GWh</b>			

**(4) Identify and measure any other generation that is not part of the project that flows through the above meters.** (This generation to be subtracted from the metered generation to determine the electricity output of the project).

The following table records the imported generation of the total wind farm (D). The NZWF import (E) is identified, as provided by their DA letter, and is separated from the total wind farm, to give Tararua III import volume.

Element and Measure	Total
(D) - Total wind farm import (Tararua III and NZWF)	389,892 kWh
(E) - NZWF Import from EMS DA letter)	345,122 kWh
<b>Tararua III Import = D - E</b>	44,769 kWh
<b>Total Electricity Imported (GWh)</b>	<b>0.04477 GWh</b>

**(5) If the electricity is measured at the turbine provide an estimate of electrical losses at the wind farm and before connection to the lines network or Transpower grid.** (Attach calculation).

The electricity is measured using revenue grade metering at the connection point and is net of losses.

**(6) A record of the Emission Reductions resulting from the Project during the year determined by the relevant emission factors as per Schedule 2 of the Project Agreement.** The construction emissions should be subtracted from this total. Once emission reductions commence the total of any operational emissions should be subtracted from the total (if applicable to your project).

Element	Annual Production	Factor	t CO <sub>2</sub> -e
Electricity (GWh) (3)	311.965	625 tonnes per GWh	194,978
		Less construction emissions and or/other project emissions (1),(2)	
Less other generation not part of the project, recorded by the meters (GWh) (4)	0.04477	625 tonnes per GWh	28
		<b>Net Emission Reductions for the year</b>	<b>194,950</b>

**(7) Emission Units claimed for the year using the emission ratio "C" set out in Clause 5.1 of the Project Agreement.**

Clause 5.1 calculation  
 $A = B \times C$

$$163,758 = 194,950 \times 0.84$$

**(8a) Advice on the location of the meters or how the generation was measured.** For example at the turbines, at the revenue meter point of entry into the lines network or the national grid

There are meters located at the turbines and also at the point of entry into the Network. TrustPower reads the Generation meters for Tararua Stage III and also NZ Wind Farms and checks that the totals match what has been submitted for each.

**(8b) Advice on how the generation was measured.** For example, metered directly, or using meter readings and adjusting for losses.

Generation is measured at the connection point. NZWF reconciled volumes are netted off the total volumes, to calculate the Tararua III readings.

SCADA readings from individual Tararua III turbines are also provided as supporting information. These readings are taken directly from the turbines.

**(8c) Advice on the quantity of electricity generated or exported.** Attach a relevant statement (or statements) from the Reconciliation Manager or an Electricity Commission Approved Half Hour Data Administrator identifying the volume of electricity used in determining the net emission reductions in section 6.

Letter Attached.

**(9) Evidence that the metering and recording equipment has been certified by a reputable, independent quality assurance service provider.** Attach copies of relevant certificate(s) of compliance for meters/metering installations for the full 12 months of the reporting year.

See attached certificates.

**(10) A statement detailing anything that has, or has the potential, to be an impediment to achieving the agreed emission reductions during commitment period one.** This should include circumstances where the final milestone is achieved later than the final milestone date.

TrustPower is not aware of any impediments to the delivery of Eligible Generation during commitment period one.

**(11) A statement identifying if you have commissioned a verification report for this Annual Report.**

A verification report is to be completed by DNV.

**(12) Checklist: Information and Documents to be provided.**

Section	Supporting information	Tick if included / attached	File name(s)
1	For construction emissions (eg fuel and materials used documentation)		
2	For operational emissions (eg materials used documentation)		
3	For amount of electricity exported (eg total GWh/Year generated for each turbine on the Project Site and for the Project)	✓	MFE_TWF_Stagelll Gen2011_Kyoto_R evised_20120309.x lsx  NZWF confirmation of Volumes_2011.pdf  Verification Tararua III Total Jan 2012_Update .doc
4	For other generation	✓	MFE_TWF_Stagelll Gen2011_Kyoto_R evised_20120309.x lsx  NZWF confirmation of Volumes_2011.pdf  Verification Tararua III Total Jan 2012_Update .doc
5	For electrical losses calculation - if not included as part of (3) or (4))	✓	MFE_TWF_Stagelll Gen2011_Kyoto.xls x
8(c)	Metering -.Electricity Market Reconciliation Manager statement or similar	✓	Verification Tararua III Total Jan 2012_Update .doc
9	Certificate(s) of compliance for meters/metering installations for the full 12 months of the reporting year.	✓	CAL-2009-318 - TWF III CB3062 - T1 Incomer - Meter Component Certification.pdf  CAL-2009-318 - TWF III CB3122 - T2 Incomer - Meter Component Certification.pdf
11	Verification report		
14	All Unit Transfer details		
	Hard Copy of Annual Report dated and signed	✓	Mailed

**(13) A statement identifying that this report:**

- has been prepared using the methodology of Schedule 2 (Measurement of Emission Reductions) of the Project Agreement (or otherwise where another measure is used as a proxy measure as detailed in section ... of this report)
- meets all other requirements of Schedule 4 (Contents for Annual Reports) of the Project Agreement.

The information in this report meets all the requirements of schedule 2 of the Project Agreement. And a letter is attached from our Data Administrator to meet the requirements of Schedule 4 of the Project Agreement.

**Signature:**

*V. Hawksworth*

**Name:**

*Vincent James Hawksworth*

**Position:**

*Chief Executive*

**Date:**

*9<sup>th</sup> March 2012*

**(14) Unit Transfer Details**

Please Note: To obtain the emission reduction units you will need a NZEUR account to transfer the agreed/allowed Emission Units.

1	Project name:	Tararua Wind Farm III
2	Date of project agreement:	29 March 2005
3	Name of the project developer/company:	TrustPower Limited
4	Project ID:	NZ-1000004
5	Calendar year for which units are being transferred:	2011
6	Account identifier:	NZ- 1060 TrustPower Limited
7	Project Participant (investor): <sup>1</sup>	
8	Quantity of units (refer to section 7 of this report):	163,758
9	Type of units:	Please do not issue these units until further notification from TrustPower. Required unit type is yet to be determined.

<sup>1</sup> Project Participant (investor) is the party that you have an agreement with to transfer emission reduction units (ERUs).



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6 March 2012

Manager, Funds Management  
Ministry for the Environment  
PO Box 10362  
Wellington  
New Zealand 6143

**Subject: Verification of Annual Generation from Tararua Wind Farm Stage III In Total**

Dear Steve,

As required in schedule 4 of the Tararua III in Total , Project Agreement with the Crown, this letter is to verify the total electricity generated from the Project into the national transmission system in 2011.

As an Electricity Commission Approved Half Hour Data Administrator, responsible for TrustPower's submissions to the Market I can confirm that the following Energy data (below) is an accurate reflection of volume submitted to the Market for the 2011 year for Stage III of the Tararua Wind Farm in Total, this data is for both New Zealand Wind Farms and TrustPower Generation. TrustPower does not submit NZ wind Farm Data but does read the metering that is used for data Submission.

Annual Generation	
kWh	Description
415,929,068	TARARUA III Total Export MID 7096
kWh	Description
389,892	TARARUA III Total Import MID 7097

Yours sincerely,

Matthew James  
Manager Data Management



13 January 2012

Garry Forward  
Chief Financial Officer  
NZ Windfarms Limited  
PO Box 13-321  
Christchurch 8141



Dear Garry

RE: Request for electricity generated and purchased

This letter is to verify that Energy Market Services (EMS) independently recorded volumes at New Zealand Windfarms Limited Te Rere Hau generation station, on ICP 0001187181WFB22, from 1 January 2011 00:01 to 31 December 2011 24:00.

I can confirm that, as at the date of this letter EMS has recorded the following volumes for the period above;

CB3042  
Meter 07061 (Import)  
**183302.72 kWh**

CB3042  
Meter 07061 (Export)  
**54630640 kWh**

CB3142  
Meter 07060 (Import)  
**161819.78 kWh**

CB3142  
Meter 07060 (Export)  
**49333310 kWh**

Yours Sincerely

Kristina strang  
Retail Services Manager  
**energy market services**

**energy market services**

a division of Transpower NZ Limited

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