



TrustPower Limited

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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: 2012

(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).

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

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

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

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).

For example:

Revenue Meter	kWh OR	Turbine Identifier	kWh
(A) - Total Wind Farm Export (Tararua III and NZWF, from TP DA letter)	443,992,090		
(B) - NZWF Export (From EMS DA letter)	116,302,075		
Tararua III Gross Export = A - B	327,690,016		
Total Electricity Exported or Generated (GWh)	327.690 GWh		

(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).

Element and Measure	Total
(D) - Total wind farm import	356,779 kWh
(Tararua III and NZWF)	
(E) - NZWF Import from	346,995 kWh
EMS DA letter)	
Tararua III Import = D - E	9,785 kWh
Total Electricity Imported (GWh)	0.00979 GWh

(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 CO2-e
Electricity (GWh) (3)	327.690	625 tonnes per GWh Less construction emissions and or/or other project emissions (1),(2)	204,806
Less other generation not part of the project, recorded by the meters (GWh) (4)	9.79	625 tonnes per GWh	6.0
		Net Emission Reductions for the year	204,800

(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 x C

 $172,032 = 204,800 \times 0.84$

(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)	V	TWF_StageIIIG en2012_Kyoto.x lsx
			NZWF Confirmation of Volumes_2012.

			pdf
			Verification Tararua III Total Jan 2013.pdf
4	For other generation	~	TWF_StageIIIG en2012_Kyoto.x lsx
			NZWF Confirmation of Volumes_2012. pdf
			Verification Tararua III Total Jan 2013.pdf
5	For electrical losses calculation - if not included as part of (3) or (4))	✓	TWF_StageIIIG en2012_Kyoto.x lsx
8(c)	MeteringElectricity Market Reconciliation Manager statement or similar	V	Verification Tararua III Total Jan 2013
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-2012-511 - TWF T1 CB3062 - Meter Component Certification.pdf
			CAL-2009-318 - TWF III CB3122 - T2 Incomer - Meter Component Certification.pdf
			CAL-2012-512 - TWF T2 CB3122 - Meter Component Certification.pdf
11	Verification report	✓	TararualIIPREV erificationReport 2012.pdf
14	All Unit Transfer details		
	Hard Copy of Annual Report dated and signed	✓	

(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:

Name:

Peter Calderwood

General Manager

Strategy & Growth

Position:

Date:

29/1/13

(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:	2012
6	Account identifier:	NZ- 1060 TrustPower Limited
7	Project Participant (investor):	
8	Quantity of units (refer to section 7 of this report):	204,800
9	Type of units:	AAU

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