

The Department of Climate Change,
Energy, the Environment and Water

Measurement and verification demonstration project




Supermarket: Appendix D

Measurement and verification (M&V) report

August 2024





Acknowledgment of Country The Department of Climate Change, Energy, the Environment and Water acknowledges that it stands on Aboriginal land. We acknowledge the Traditional Custodians of the land and we show our respect for Elders past, present and emerging through thoughtful and collaborative approaches to our work, seeking to demonstrate our ongoing commitment to providing places in which Aboriginal people are included socially, culturally and economically.

Published by NSW Department of Climate Change, Energy, the Environment and Water

dceew.nsw.gov.au

Title Measurement and verification demonstration project

Sub-title Food manufacturer: appendix D Measurement and verification (M&V) report

First published August 2024

ISBN 978-1-923076-40-2

Copyright and disclaimer

© State of New South Wales through the Department of Climate Change, Energy, the Environment and Water 2024. Information contained in this publication is based on knowledge and understanding at the time of writing, August 2024, and is subject to change. For more information, please visit energy.nsw.gov.au/copyright

Contents

<u>Appendix D: M&V report</u>	<u>4</u>
<u>1. Overview of the M&V report</u>	<u>4</u>
<u>2. Project background</u>	<u>5</u>
<u>3. M&V data collection during current reporting period</u>	<u>6</u>
<u>4. Savings calculation and methodology</u>	<u>8</u>
<u>5. Verified savings</u>	<u>14</u>
<u>6. List of appendices</u>	<u>18</u>
<u>Appendix D1: Reporting period energy and independent variables</u>	<u>19</u>
<u>Appendix D2: Determination of normalised savings for each observation</u>	<u>35</u>

Appendix D: M&V report

This measurement and verification (M&V) report was prepared by the M&V practitioner after the Implementation of the energy efficiency measures (EEMs) to detail and communicate the findings of the M&V process using the procedure outlined in the M&V plan.

This document was prepared in a way that is in adherence with the reporting requirements described in chapter 13 of EVO 10000 – 1:2022, IPMVP Core Concepts 2022.

1. Overview of the M&V report

1.1 M&V report authorisation

Site name	Bravo Food Company
Date of this M&V report	25 Jan 2021
Period covered by this report	1 December 2019 to 30 November 2020
Name and date of the authorised M&V plan being followed	M&V Plan – Food manufacturer dryer upgrade, 16 November 2019
International Performance Measurement and Verification Protocol (IPMVP®) version being followed	IPMVP Core Concepts 2022 ¹

The signatures below indicate acceptance and adoption of this report.

Organisation that prepared the report

Person responsible	Loretta Liu
Title	M&V Officer
Organisation	Compliance and Audits Pty Ltd
Signature of approval and acceptance	Loretta Liu
Date	25 January 2021

¹ INTERNATIONAL PERFORMANCE MEASUREMENT AND VERIFICATION PROTOCOL (IPMVP®), CORE CONCEPTS, MARCH 2022, EVO 10000 – 1:2022

Third party quality assurance

Person responsible	Not undertaken
Title	
Organisation	
Signature of approval and acceptance	
Date	

Energy User

Person responsible	Md. Akbar Hussain
Title	Production Manager
Organisation	Bravo Food Company
Signature of approval and acceptance	Md. Akbar Hussain
Date	2 February 2021

1.2 M&V report distribution

Bravo Food Company

Earnest ESCO

Quality Assessor

2. Project background

Energy source	Gas	Electricity
	IPMVP Option B	IPMVP Option B
M&V option	Retrofit isolation: All parameter measurement	Retrofit isolation: All parameter measurement
Energy efficiency measure (EEM) description	<ol style="list-style-type: none"> The burners on the gas dryer were replaced with new, more efficient, burners. VSDs were fitted to the burner fans. 	<ol style="list-style-type: none"> The burners on the gas dryer were replaced with new, more efficient, burners. VSDs were fitted to the burner fans.

	3. The sensors and controls for the burners and fans were upgraded.	3. The sensors and controls for the burners and fans were upgraded.
Reporting period start date	1 December 2019	
Reporting period end date	30 November 2020	
Frequency of M&V reports	Annual	

3. M&V data collection during current reporting period

Parameter	Details
Reporting period start time	00:00 on 1 December 2019
Reporting period end time	24:00 on 30 November 2020
Energy and key parameter data	Baseline data was collected from the isolation electricity and gas meters via SCADA systems. Refer to Appendix 1.
Independent variable data	The same set of independent variables as used in the baseline (production kgs, sqrt of production kgs) have been used. Refer to Appendix 1 for a table of the data.
Static factor data	Static factors are shown in the M&V plan. There are no changes in static factors.

Description of inspection/operational verification activities conducted and findings

The EEMs were installed and commissioned over the period 9 to 27 November 2019. On 30 November 2019 the site was visited by Loretta Liu to inspect the installation and verify that the EEMs were performing as designed. The following was identified by Ms. Liu:

- The burners were inspected and the control solenoid that varied burner fire rate could be seen to be modulating.
- The VSDs on the fans were inspected, and it could be seen that speed modulated.
- Live data in the SCADA system was monitored over a variety of loads, from low to high. This showed a constant excess air percentage that only varied between 4.5% and 5.8%. Previously it was believed that excess air could approach 30% or higher under conditions of low load.
- Scatter plots showing burner fire rate and fan speed versus hourly production were developed. These showed a strong correlation, indicating that both burners and fans were modulating based on production.

The above observations revealed that the EEMs were indeed operating as expected.

After three months, the site interval data was analysed to determine if the savings were in line with the expected savings that the energy service provider had estimated.

The savings was relatively close to those predicted by the energy service provider:

For gas, percentage of actual savings in the first 3 months was 26% while those estimated by the energy service provider was 21%

For electricity, percentage of actual savings in the first 3 months was 19% while those estimated by the energy service provider was 26%

As the EEMs were verified to be performing as intended it was identified that the energy service provider had

Parameter	Details
	<p>appeared to underestimate the gas savings and overestimate the electricity savings.</p> <p>The M&V practitioner conveyed to the energy user that the savings were different than expected. He cautioned that three months of data was probably not sufficient to estimate the annual savings, and that it was difficult for energy auditors to estimate exact savings.</p> <p>Every three months Loretta Liu reviewed the data and determined the avoided energy use to see if there were unexpected changes. In general, there were no unexpected changes, although it was observed that electricity savings rose slightly after about 3 months.</p>

4. Savings calculation and methodology

4.1 Method overview

1. Data was collected in the reporting period, including:
 - energy consumption data (gas and electricity)
 - independent variables (production kg and the square root of production kg)
 - data on changes to static factors.

The same independent variables are used as in the baseline period.

2. Using the data collected in the reporting period, regression models for gas and electricity were built using the LINEST function in Microsoft Excel to determine the mathematical relationship between energy usage and the independent variables.
3. The models were tested to determine their statistical validity. The gas model was acceptable. The electricity model, did not pass statistical validity tests, but in conversations with the production manager it was agreed to accept it.
4. As stipulated in the M&V plan, the basis for savings was identified as being “normalised savings”.
5. As there were no changes in static factors, there was no need to undertake any non-routine baseline adjustments.
6. Values of the independent variables for the normal year were collected.
7. Using the values of the independent variables in the normal year, the baseline and reporting period regression models were respectively applied to this data to determine the adjusted baseline energy and adjusted reporting period energy. It took into account

the range of the regression models with respect to the range of the independent variables in the normal year.

8. The annual savings is the total adjusted baseline energy minus the adjusted reporting period energy, adjusted to the conditions of the normal year.

4.2 Method detail

The reporting period models were established via regression analysis using the LINEST function in Microsoft Excel:

$$\text{Daily gas consumption (GJ)} = 0.84629 + 0.000482 \times \text{kg production}$$

Equation 1 Reporting period gas regression model

$$\text{Daily electricity consumption (MWh)} = 0.10286 + 0.00953 \times \sqrt{(\text{kg Production})}$$

Equation 2 Reporting period electricity regression model

The model statistics, including the range of the independent variables, t-statistics, CV_{RMSE} , and R^2 are shown in Tables 1 to 4.

Table 1 Gas reporting period model statistical test results

Statistical test	Value	IPMVP recommendation	Acceptable?
Expected values error	0.000%	< 0.005%	Yes
Adjusted R^2	0.96	> 0.75	Yes
CV_{RMSE}	0.18	< 0.2	Yes

Table 2 Electricity reporting period model statistical test results

Statistical test	Value	IPMVP recommendation	Acceptable?
Expected values error	0.000%	< 0.005%	Yes
Adjusted R^2	0.91	> 0.75	Yes
CV_{RMSE}	0.22	< 0.2	See discussion below.

The model’s CV_{RMSE} was slightly greater than 0.2, however, all parties agreed to accept this, noting that the baseline electricity model had the same problem – the model has some “noise” that it is not possible to account for.

Table 3 Gas reporting period coefficients, t-statistics, and range of independent variables.

Parameter	Intercept	kg of dry product	
Coefficient		0.84	0.0005
t-statistic		1.51	92.95
t-statistic acceptable? (> 2)	N/A		Yes
Minimum value	N/A		0
Maximum value	N/A		247606

Table 4 Electricity reporting period model coefficients, t-statistics, and range of independent variables.

Parameter	Intercept	Square root of kg of dry product	
Coefficient		0.103	0.01
t-statistic		2.37	62.28
t-statistic acceptable? (> 2)	N/A		Yes
Minimum value	N/A		0
Maximum value	N/A		497.60

The graphs below show the actual energy use in the baseline period along with that predicted by the energy model. It demonstrates that the gas model is a very good predictor of energy usage, and that the electricity model is a reasonable predictor.

Figure 1 Gas reporting period actual and predicted consumption.

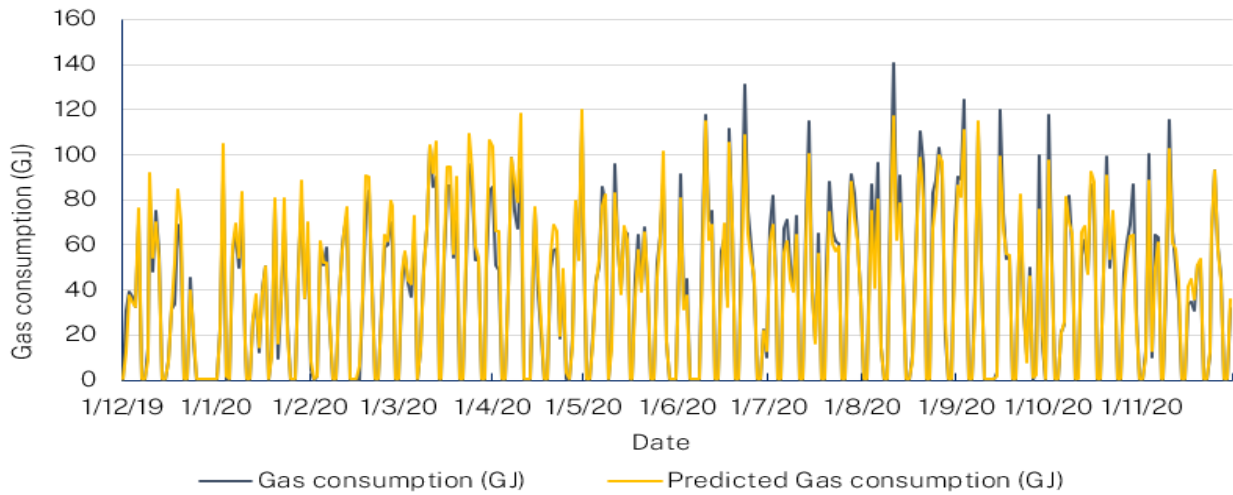
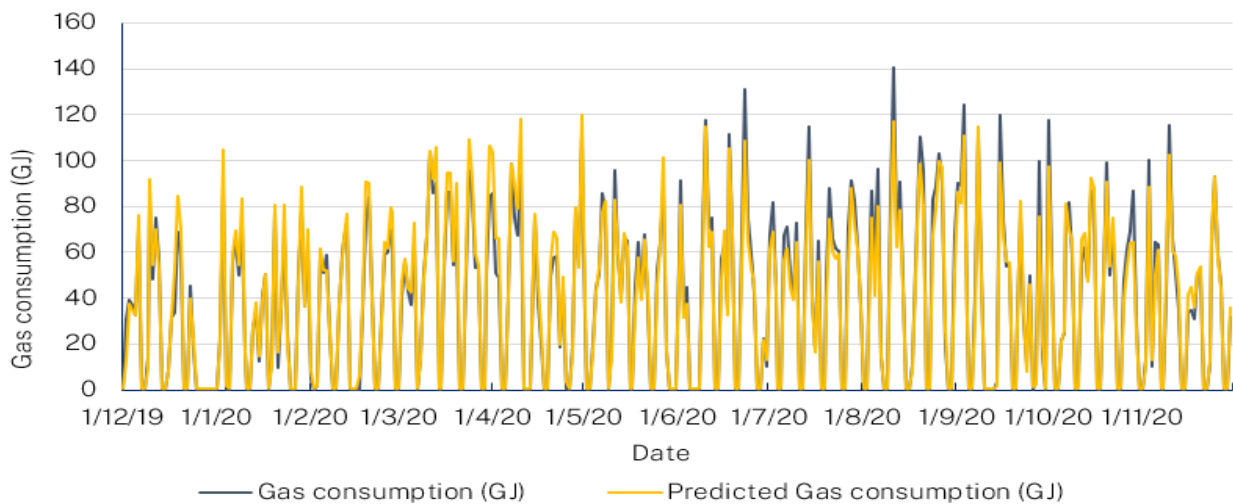


Figure 2 Electricity reporting period actual and predicted electricity consumption.



The baseline regression model and reporting period regression models were then used to determine the adjusted baseline and reporting period energy for each day of the normal year.

The baseline models (as developed in the M&V plan) are:

$$\text{Daily gas consumption (GJ)} = 2.1688 + 0.00058966 \times \text{kg production}$$

Equation 3 Baseline gas regression model

$$\text{Daily electricity consumption (MWh)} = 0.14588 + 0.012837 \times \text{square root of kg production}$$

Equation 4 Baseline electricity regression model

The range of independent variables in the baseline, reporting, and normal years is:

Table 5 Range of independent variables in the baseline year, reporting period year and normal year

Period		Gas model (kg of dry product)	Electricity model (square root of kg of dry product)
Baseline period	Min	0	0
	Max	238,042	487.90
Reporting period	Min	0	0
	Max	247,606	497.60
Normal year	Min	0	0
	Max	247,606	497.60

Table 5 shows that for both kg of dry product and square root of kg of dry product, the normal year has one or more observations where the value is above the baseline period maximum.

IPMVP has no specific guidance around the extent to which a regression model is valid outside the range of its independent variables. The American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) Guideline 14-2014 Measurement of Energy, Demand and Water Savings ([ASHRAE Guideline 14](#))² allows for a regression to be used with a range extension of up to 10%.

In this case, for gas, the maximum value of 247,606 kg of production in the normal year is 4.0% outside the range of the baseline regression model. This is considered acceptable.

For electricity, the maximum values of 497.6 of the square root of production in the normal year is 2.0% outside the range of the baseline regression model. This too is considered acceptable.

On this basis, no observations are excluded from the overall determination of savings due to an observation in a normal year being excessively outside the range of either the baseline or reporting period regression models.

² ASHRAE Guideline 14-2014 Measurement of Energy, Demand and Water Savings. Approved by ASHRAE on December 18, 2014. © 2014 ASHRAE ISSN 1049-894X

The range of the models are also acceptable under the NSW Energy Savings Scheme (ESS) and Victorian Energy Upgrades (VEU) program, as shown in the table below, along with the IPMVP and ASHRAE recommendations.

Table 6 Acceptable range for the independent variables under IPMVP, ASHRAE, ESS and VEU

Range	Independent variable	Max value	Acceptable IPMVP range	Acceptable ASHRAE range
Baseline period year	Production kg	238,042		261,846
	Sqrt of production kg	487.90		536.69
Reporting period year	Production kg	247,606		272,367
	Sqrt of production kg	497.60		547.36
Acceptable range for determination of savings	Production kg		No specific guidance	261,846
	Sqrt of production kg		No specific guidance	536.69
Is the normal year within the acceptable range?	Production kg	247,606		Yes
	Sqrt of production kg	497.60		Yes

Range	Independent variable	Max value	Acceptable ESS range ³	Acceptable VEU range
Baseline year	Production kg	238,042	249,944	
	Sqrt of production kg	487.90	512.29	
Reporting period year	Production kg	247,606	259,986	
	Sqrt of production kg	497.60	522.48	
Acceptable range for determination of savings	Production kg		249,944	249,944
	Sqrt of production kg		512.29	512.29

³ The ESS applies an Effective Range Adjustment Factor on observations outside the effective range.

Is the normal year within the acceptable range?	Production kg	247,606	Yes	Yes
	Sqrt of production kg	497.60	Yes	Yes

4.3 Assumptions used in the savings calculations

It was assumed that there were no changes to the static factors that were not recorded (such as heating, ventilation and air conditioning (HVAC) operating times). The M&V practitioner verified every three months by phone call with the production manager that there were no changes to the site that might cause energy usage to change.

As outlined above, it is similarly assumed that the baseline and reporting models are effective over the full range of independent variables in the normal year.

4.4 Non-routine adjustments

There have been no changes to static factors, so no non-routine adjustments have been made.

5. Verified savings

5.1 Verified savings calculations

Savings were calculated based on normalised savings and are presented in the Table 7 below. It shows savings in energy, cost and greenhouse gas for the reporting period that spanned from 1 December 2019 to 30 November 2020 using the normal year from 1 January 2020 to 31 December 2020.

Table 7 Summary of savings

Savings	Gas (GJ)	Electricity (MWh)	Total (MWh)
Normalised energy savings	3,717	293	1,326
Cost savings	\$39,767	\$61,630	\$101,397
GHG savings (t CO ₂ -e)	192	232	285

Appendix D2 shows, for each day of the normal year (calendar year 2020), the values of the independent variables, the adjusted baseline energy, adjusted reporting energy and savings. This is shown in the charts below:

Figure 3 Baseline and Reporting Gas Energy adjusted to Normal Conditions

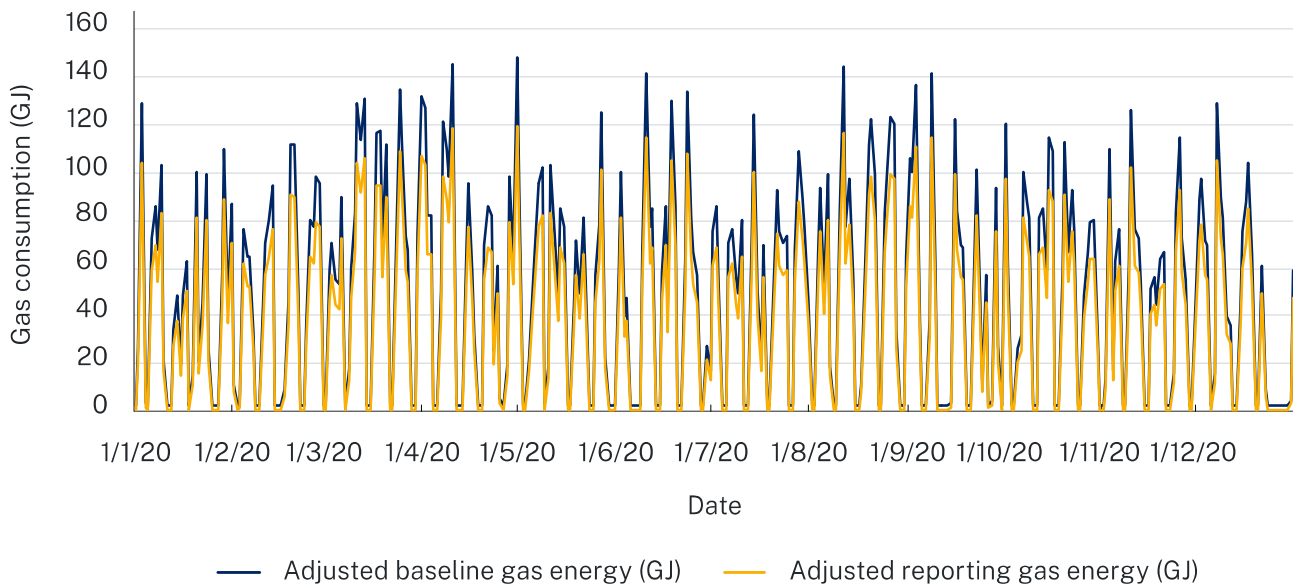
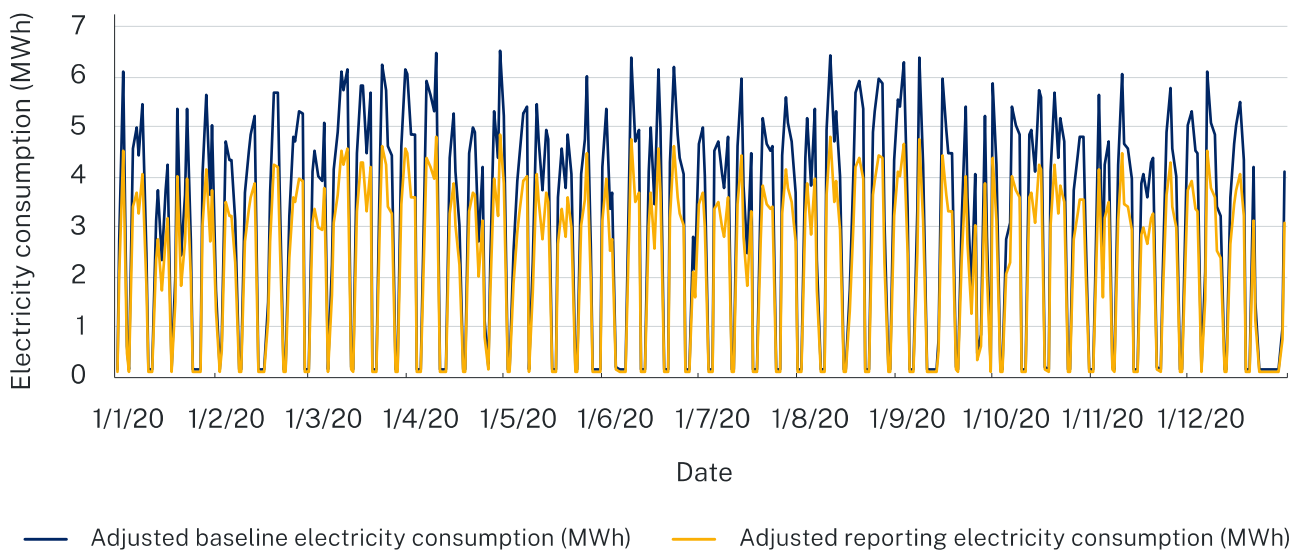


Figure 4 Baseline and Reporting Electricity Consumption adjusted to Normal Conditions



5.2 Uncertainty

The sources of uncertainty are, as described in the M&V plan:

- the uncertainty in the baseline and reporting period energy models
- the metering uncertainty.

The uncertainty in the reporting period energy model is shown in Table 8.

Table 8 – reporting period model uncertainty

Error	Gas	Elec
Baseline model standard error percent (allowing for autocorrelation) *	1.4%	1.4%
Baseline submeter standard error*	0.13%	0.05%
Baseline overall standard error	1.4%	1.4%

Combining the baseline and reporting period uncertainties, the overall uncertainty is determined as follows:

$$Savings\ standard\ uncertainty = \sqrt{SE(Baseline)^2 + SE(Reporting)^2}$$

Equation 5 Formula for calculating savings standard uncertainty

The standard uncertainty of the gas savings is shown in Table 9.

Table 9 Gas savings uncertainty

Uncertainty parameter	Baseline	Reporting	Overall error
Standard error of savings (GJ)	292	207	358
Uncertainty at the 90% confidence level (GJ)	484	341	591
		Gas savings (GJ)	3,717
		Uncertainty as a percent of savings @ the 90% confidence level	16%

Table 10 Electricity savings uncertainty

Uncertainty parameter	Baseline	Reporting	Overall error
Standard error of savings (MWh)		24.5	27.1
Uncertainty at the 90% confidence level (MWh)		40.5	44.9
		Electricity savings (MWh)	293
		Uncertainty as a percent of savings @ the 90% confidence level	15%

The IPMVP recommendation that savings be at least twice the standard error is achieved for both gas and electricity

Based on the above analysis, savings are:

- Gas savings: 3,700 GJ \pm 590 GJ at the 90% confidence level.
- Electricity savings: 290 MWh \pm 45 MWh at the 90% confidence level.

5.3 Utility costs used to calculate the reported savings

Savings have been valued at a tariff of \$0.21/kWh for electricity and \$10.70/GJ for gas.

5.4 Greenhouse gas emissions factors used to report savings

The emissions factor of the reporting period year has been used to determine savings.

The reporting year GHG emissions factor is based on the 2019/2020 financial year emissions factors estimates published in the [National Greenhouse Accounts Factors, August 2021](#).

It includes scope 1 emissions for gas and scope 2 emissions for electricity.

- Gas scope 1 emissions factor: 51.53 kg CO₂-e/GJ
- Electricity scope 2 emissions factor: 0.79 kg CO₂-e/kWh

5.5 Verified energy and cost savings compared with those estimated in the M&V plan

The expected and actual savings are shown in the table below.

Table 11 Expected and actual savings

Savings	Energy savings	Cost savings	GHG savings (t CO ₂ -e)
Gas expected (GJ)	4,000	\$43,000	206
Gas actual (GJ)	3,700	\$40,000	192
Electricity expected (MWh)	300	\$63,000	237
Electricity actual (MWh)	290	\$61,000	231
Total expected (MWh)	1,400	\$106,000	443
Total actual (MWh)	1,300	\$101,000	423

Savings are slightly less than estimated by the energy service provider delivering the project. However, the energy service provider's estimate of overall total savings is close to the actual.

The project has still delivered useful cost and greenhouse gas savings.

- The project cost was \$510,000.
- The M&V Plan cost was \$35,000.
- The year 1 (2020) M&V savings report cost is \$7,000 (including site verification).
- In future years the M&V savings reporting cost is \$4,000.
- Annual savings are \$101,000.

Using a discount factor of 8% and assuming the value of savings declines by 1% per year, the net present value of the project over the expected 15-year life of the burners is \$218,000⁴. It includes an internal rate of return of 15%, assuming the EEMs continue to perform effectively.

6. List of appendices

- Appendix D 1 Reporting period energy and independent variables
- Appendix D 2 Determination of normalised savings for each observation

⁴ Ignoring the value of any certificates in this calculation, which would increase the NPV

Appendix D1: Reporting period energy and independent variables

Table 12 Baseline energy and independent variable data

Date	Gas consumption (GJ)	Electricity consumption (MWh)	Production (kg)	Square root of production
1/12/2019	0.00	0.00	-	-
2/12/2019	31.00	2.20	23,421	153
3/12/2019	39.45	3.49	75,840	275
4/12/2019	36.90	3.79	71,014	266
5/12/2019	32.74	3.42	65,290	256
6/12/2019	69.39	3.74	156,482	396
7/12/2019	0.00	0.00	7	3
8/12/2019	0.00	0.00	-	-
9/12/2019	14.14	2.96	17,256	131
10/12/2019	81.14	3.94	188,481	434
11/12/2019	48.18	3.52	111,140	333
12/12/2019	75.16	4.26	143,291	379
13/12/2019	56.46	4.33	108,967	330
14/12/2019	0.00	0.00	-	-
15/12/2019	0.00	0.00	-	-
16/12/2019	8.19	0.89	14,386	120
17/12/2019	31.42	2.85	63,838	253
18/12/2019	33.92	3.34	105,202	324
19/12/2019	68.82	4.01	173,801	417
20/12/2019	58.45	3.68	143,226	378

Date	Gas consumption (GJ)	Electricity consumption (MWh)	Production (kg)	Square root of production
21/12/2019	0.00	0.00	9	3
22/12/2019	0.00	0.00	-	-
23/12/2019	45.40	2.94	80,744	284
24/12/2019	17.99	0.86	43,835	209
25/12/2019	0.00	0.00	-	-
26/12/2019	0.00	0.00	-	-
27/12/2019	0.00	0.00	-	-
28/12/2019	0.00	0.00	-	-
29/12/2019	0.00	0.00	-	-
30/12/2019	0.00	0.00	-	-
31/12/2019	0.00	0.00	-	-
1/01/2020	0.00	0.00	-	-
2/01/2020	22.67	2.91	41,508	204
3/01/2020	88.57	4.46	215,584	464
4/01/2020	0.00	0.47	1,372	37
5/01/2020	0.00	0.00	-	-
6/01/2020	55.61	3.01	119,968	346
7/01/2020	66.32	3.28	142,333	377
8/01/2020	49.97	3.60	111,684	334
9/01/2020	70.94	4.01	171,564	414
10/01/2020	17.61	2.15	32,609	181
11/01/2020	0.00	0.08	-	-
12/01/2020	0.16	0.41	-	-
13/01/2020	26.85	2.69	54,513	233

Date	Gas consumption (GJ)	Electricity consumption (MWh)	Production (kg)	Square root of production
14/01/2020	33.70	3.13	77,971	279
15/01/2020	12.57	2.57	29,168	171
16/01/2020	40.57	4.17	78,212	280
17/01/2020	50.20	3.83	102,513	320
18/01/2020	0.00	0.00	-	-
19/01/2020	13.40	0.93	20,960	145
20/01/2020	76.85	3.91	166,350	408
21/01/2020	9.57	1.30	31,739	178
22/01/2020	35.54	2.25	73,976	272
23/01/2020	67.04	4.50	165,291	407
24/01/2020	24.51	4.11	40,842	202
25/01/2020	0.00	0.00	-	-
26/01/2020	0.00	0.00	-	-
27/01/2020	0.00	0.00	-	-
28/01/2020	50.17	2.41	93,448	306
29/01/2020	78.29	4.13	182,454	427
30/01/2020	36.61	4.33	74,154	272
31/01/2020	61.18	3.65	143,940	379
1/02/2020	4.69	0.82	15,392	124
2/02/2020	0.00	0.00	-	-
3/02/2020	2.00	1.41	1,744	42
4/02/2020	57.52	4.06	126,618	356
5/02/2020	50.82	4.36	106,512	326
6/02/2020	58.67	4.27	106,292	326

Date	Gas consumption (GJ)	Electricity consumption (MWh)	Production (kg)	Square root of production
7/02/2020	24.96	3.90	53,236	231
8/02/2020	0.00	0.00	-	-
9/02/2020	0.00	0.00	-	-
10/02/2020	36.00	2.67	75,686	275
11/02/2020	59.12	4.11	116,832	342
12/02/2020	65.05	4.21	133,144	365
13/02/2020	73.06	4.32	157,128	396
14/02/2020	0.00	0.38	-	-
15/02/2020	0.00	0.00	-	-
16/02/2020	0.00	0.00	-	-
17/02/2020	0.00	2.67	11,134	106
18/02/2020	34.62	3.79	75,312	274
19/02/2020	73.11	4.43	186,912	432
20/02/2020	84.29	4.49	185,330	430
21/02/2020	42.53	2.28	81,802	286
22/02/2020	0.00	0.00	-	-
23/02/2020	0.00	0.00	-	-
24/02/2020	30.77	2.43	57,760	240
25/02/2020	58.60	3.15	132,316	364
26/02/2020	59.71	3.05	126,826	356
27/02/2020	70.19	3.88	163,088	404
28/02/2020	64.83	3.14	159,044	399
29/02/2020	0.00	1.21	-	-
1/03/2020	0.00	0.00	-	-

Date	Gas consumption (GJ)	Electricity consumption (MWh)	Production (kg)	Square root of production
2/03/2020	40.12	2.35	95,960	310
3/03/2020	56.11	3.27	116,524	341
4/03/2020	42.95	3.53	90,194	300
5/03/2020	37.03	3.20	87,298	295
6/03/2020	62.54	3.43	149,186	386
7/03/2020	0.00	0.00	-	-
8/03/2020	14.18	0.74	26,166	162
9/03/2020	49.72	2.76	97,512	312
10/03/2020	66.96	4.18	137,760	371
11/03/2020	103.39	4.23	214,840	464
12/03/2020	85.61	4.32	188,966	435
13/03/2020	90.28	4.13	218,078	467
14/03/2020	0.00	0.00	14	4
15/03/2020	0.00	0.48	-	-
16/03/2020	51.89	3.02	114,746	339
17/03/2020	86.15	4.25	194,800	441
18/03/2020	86.24	4.27	195,182	442
19/03/2020	54.29	4.06	114,444	338
20/03/2020	70.65	4.00	185,342	431
21/03/2020	0.00	0.00	-	-
22/03/2020	0.00	0.00	-	-
23/03/2020	49.29	2.90	112,068	335
24/03/2020	95.61	4.26	224,778	474
25/03/2020	84.91	4.36	189,966	436

Date	Gas consumption (GJ)	Electricity consumption (MWh)	Production (kg)	Square root of production
26/03/2020	53.50	4.18	121,238	348
27/03/2020	53.50	4.03	110,936	333
28/03/2020	0.00	0.00	-	-
29/03/2020	0.00	0.00	-	-
30/03/2020	50.51	2.84	121,820	349
31/03/2020	84.09	4.21	219,746	469
1/04/2020	85.93	4.39	212,916	461
2/04/2020	50.94	4.09	135,006	367
3/04/2020	48.91	3.33	135,362	368
4/04/2020	0.00	0.00	-	-
5/04/2020	0.00	0.00	-	-
6/04/2020	41.10	2.72	81,612	286
7/04/2020	98.50	4.39	203,230	451
8/04/2020	75.15	3.80	183,110	428
9/04/2020	67.17	4.07	162,758	403
10/04/2020	93.69	4.83	243,868	494
11/04/2020	0.00	0.00	-	-
12/04/2020	0.00	0.00	-	-
13/04/2020	0.00	0.00	-	-
14/04/2020	51.09	2.31	109,158	330
15/04/2020	74.96	3.00	158,130	398
16/04/2020	39.25	3.05	94,508	307
17/04/2020	21.01	2.46	50,180	224
18/04/2020	0.00	0.00	-	-

Date	Gas consumption (GJ)	Electricity consumption (MWh)	Production (kg)	Square root of production
19/04/2020	0.00	0.00	-	-
20/04/2020	49.60	2.98	113,898	337
21/04/2020	57.70	4.09	141,380	376
22/04/2020	58.28	3.77	135,994	369
23/04/2020	18.42	1.76	39,060	198
24/04/2020	44.16	3.08	100,270	317
25/04/2020	0.60	0.23	5,588	75
26/04/2020	0.00	0.15	8	3
27/04/2020	18.42	1.00	29,260	171
28/04/2020	77.94	3.75	163,652	405
29/04/2020	54.67	4.37	108,442	329
30/04/2020	111.24	4.42	247,606	498
1/05/2020	65.76	3.77	155,568	394
2/05/2020	0.00	0.00	-	-
3/05/2020	0.00	0.00	-	-
4/05/2020	19.82	1.97	33,654	183
5/05/2020	44.12	3.78	86,608	294
6/05/2020	50.25	3.71	109,256	331
7/05/2020	85.74	4.33	158,858	399
8/05/2020	78.43	3.76	169,082	411
9/05/2020	0.00	0.00	-	-
10/05/2020	19.03	0.93	27,678	166
11/05/2020	95.78	3.85	170,960	413
12/05/2020	58.90	3.02	125,172	354

Date	Gas consumption (GJ)	Electricity consumption (MWh)	Production (kg)	Square root of production
13/05/2020	40.54	2.38	77,930	279
14/05/2020	66.29	4.08	140,662	375
15/05/2020	65.10	2.85	127,758	357
16/05/2020	0.00	0.00	-	-
17/05/2020	0.00	0.00	-	-
18/05/2020	44.15	2.80	72,528	269
19/05/2020	64.57	4.15	117,872	343
20/05/2020	41.36	3.90	79,676	282
21/05/2020	67.98	4.30	134,050	366
22/05/2020	39.57	1.78	91,960	303
23/05/2020	0.00	0.00	-	-
24/05/2020	0.00	0.00	-	-
25/05/2020	51.44	2.70	92,994	305
26/05/2020	63.95	4.24	128,746	359
27/05/2020	87.22	4.01	209,300	457
28/05/2020	17.44	1.27	34,934	187
29/05/2020	0.00	0.00	-	-
30/05/2020	0.00	0.00	-	-
31/05/2020	0.00	0.00	-	-
1/06/2020	54.42	2.58	99,152	315
2/06/2020	91.23	4.31	165,914	407
3/06/2020	32.57	3.01	63,468	252
4/06/2020	44.87	2.40	76,490	277
5/06/2020	0.00	0.00	6	2

Date	Gas consumption (GJ)	Electricity consumption (MWh)	Production (kg)	Square root of production
6/06/2020	0.00	0.00	-	-
7/06/2020	0.00	0.00	-	-
8/06/2020	0.00	0.00	-	-
9/06/2020	65.76	2.72	109,128	330
10/06/2020	117.52	4.52	237,278	487
11/06/2020	70.52	4.15	127,546	357
12/06/2020	75.24	3.38	140,860	375
13/06/2020	0.00	0.00	-	-
14/06/2020	0.00	0.00	-	-
15/06/2020	57.04	2.95	95,552	309
16/06/2020	62.53	3.78	142,082	377
17/06/2020	35.34	2.12	66,086	257
18/06/2020	111.68	4.25	217,498	466
19/06/2020	68.69	3.11	142,162	377
20/06/2020	0.00	0.00	-	-
21/06/2020	0.00	0.00	-	-
22/06/2020	64.04	2.76	104,986	324
23/06/2020	131.19	4.46	223,504	473
24/06/2020	75.25	4.26	133,564	365
25/06/2020	59.88	3.73	109,846	331
26/06/2020	42.87	1.80	93,184	305
27/06/2020	0.00	0.00	-	-
28/06/2020	0.00	0.19	-	-
29/06/2020	22.19	1.84	43,180	208

Date	Gas consumption (GJ)	Electricity consumption (MWh)	Production (kg)	Square root of production
30/06/2020	10.18	1.67	24,594	157
1/07/2020	67.47	2.54	124,690	353
2/07/2020	82.00	3.67	141,540	376
3/07/2020	42.26	2.96	90,166	300
4/07/2020	0.00	0.00	-	-
5/07/2020	0.00	0.00	-	-
6/07/2020	67.13	2.34	115,718	340
7/07/2020	71.07	3.46	126,528	356
8/07/2020	51.63	3.59	91,774	303
9/07/2020	41.77	3.26	80,000	283
10/07/2020	72.69	3.03	132,372	364
11/07/2020	0.00	0.00	-	-
12/07/2020	0.00	0.00	-	-
13/07/2020	67.81	2.85	122,548	350
14/07/2020	114.94	4.22	206,900	455
15/07/2020	40.74	3.40	81,274	285
16/07/2020	17.32	2.72	32,490	180
17/07/2020	65.24	4.00	114,224	338
18/07/2020	0.00	0.00	-	-
19/07/2020	0.00	0.00	-	-
20/07/2020	47.65	2.64	76,856	277
21/07/2020	88.15	4.32	152,796	391
22/07/2020	65.90	3.94	124,074	352
23/07/2020	61.60	2.39	116,482	341

Date	Gas consumption (GJ)	Electricity consumption (MWh)	Production (kg)	Square root of production
24/07/2020	60.67	3.02	121,158	348
25/07/2020	0.00	0.00	-	-
26/07/2020	0.00	0.00	-	-
27/07/2020	70.31	2.96	111,458	334
28/07/2020	91.29	4.10	181,166	426
29/07/2020	82.93	4.07	148,704	386
30/07/2020	62.69	3.95	126,766	356
31/07/2020	37.00	3.56	75,664	275
1/08/2020	0.00	0.00	-	-
2/08/2020	0.00	0.00	-	-
3/08/2020	65.00	2.69	109,834	331
4/08/2020	86.72	3.93	154,506	393
5/08/2020	56.05	2.58	83,034	288
6/08/2020	96.55	3.90	164,746	406
7/08/2020	14.41	1.60	28,804	170
8/08/2020	0.00	0.00	-	-
9/08/2020	0.00	0.00	-	-
10/08/2020	80.17	2.75	138,576	372
11/08/2020	140.69	4.35	241,500	491
12/08/2020	69.33	4.26	127,504	357
13/08/2020	90.66	3.87	160,892	401
14/08/2020	47.00	3.59	89,664	299
15/08/2020	0.00	0.00	-	-
16/08/2020	0.00	0.00	-	-

Date	Gas consumption (GJ)	Electricity consumption (MWh)	Production (kg)	Square root of production
17/08/2020	10.78	1.96	15,444	124
18/08/2020	51.94	2.77	98,404	314
19/08/2020	94.75	3.88	186,280	432
20/08/2020	110.10	4.00	203,496	451
21/08/2020	95.56	3.73	164,444	406
22/08/2020	0.00	0.00	-	-
23/08/2020	0.00	0.00	-	-
24/08/2020	83.06	2.70	137,844	371
25/08/2020	88.58	4.14	161,920	402
26/08/2020	103.31	4.02	205,336	453
27/08/2020	90.66	3.72	199,984	447
28/08/2020	20.01	3.25	53,352	231
29/08/2020	0.00	0.00	-	-
30/08/2020	0.00	0.00	-	-
31/08/2020	66.64	2.81	106,964	327
1/09/2020	90.14	4.33	176,952	421
2/09/2020	89.12	4.53	167,324	409
3/09/2020	124.18	4.30	228,540	478
4/09/2020	32.03	3.09	62,764	251
5/09/2020	0.00	0.00	-	-
6/09/2020	0.00	0.00	-	-
7/09/2020	40.19	2.31	62,688	250
8/09/2020	110.12	4.06	237,056	487
9/09/2020	52.83	2.65	101,120	318

Date	Gas consumption (GJ)	Electricity consumption (MWh)	Production (kg)	Square root of production
10/09/2020	0.00	0.00	-	-
11/09/2020	0.00	0.00	-	-
12/09/2020	0.00	0.00	-	-
13/09/2020	0.00	0.00	-	-
14/09/2020	3.21	0.67	2,060	45
15/09/2020	119.85	4.17	204,460	452
16/09/2020	74.28	4.07	139,016	373
17/09/2020	53.66	3.98	114,328	338
18/09/2020	55.20	3.70	113,296	337
19/09/2020	0.00	0.00	4	2
20/09/2020	0.00	0.00	-	-
21/09/2020	31.33	2.12	56,212	237
22/09/2020	75.38	3.96	168,832	411
23/09/2020	30.92	3.97	71,588	268
24/09/2020	11.45	1.76	14,964	122
25/09/2020	49.67	3.68	93,152	305
26/09/2020	0.00	0.01	652	26
27/09/2020	4.41	0.64	2,900	54
28/09/2020	99.80	4.49	155,208	394
29/09/2020	16.47	2.59	42,028	205
30/09/2020	0.00	0.09	-	-
1/10/2020	117.37	4.29	200,212	447
2/10/2020	54.19	3.98	101,704	319
3/10/2020	0.00	0.00	-	-

Date	Gas consumption (GJ)	Electricity consumption (MWh)	Production (kg)	Square root of production
4/10/2020	0.00	0.00	-	-
5/10/2020	21.27	1.92	41,300	203
6/10/2020	24.52	1.59	51,572	227
7/10/2020	76.21	3.82	167,328	409
8/10/2020	81.66	3.98	143,956	379
9/10/2020	58.99	3.16	133,536	365
10/10/2020	0.00	0.00	-	-
11/10/2020	3.87	0.73	-	-
12/10/2020	55.59	3.60	134,616	367
13/10/2020	62.12	3.35	140,636	375
14/10/2020	47.71	2.80	96,072	310
15/10/2020	86.86	4.22	190,408	436
16/10/2020	80.64	4.12	180,432	425
17/10/2020	0.00	0.00	8	3
18/10/2020	0.00	0.00	-	-
19/10/2020	46.57	2.39	95,156	308
20/10/2020	99.18	3.83	187,000	432
21/10/2020	49.72	3.80	110,192	332
22/10/2020	65.50	3.48	154,040	392
23/10/2020	56.13	2.99	126,584	356
24/10/2020	0.00	0.09	-	-
25/10/2020	0.00	0.00	-	-
26/10/2020	47.83	2.44	78,548	280
27/10/2020	61.02	2.87	110,212	332

Date	Gas consumption (GJ)	Electricity consumption (MWh)	Production (kg)	Square root of production
28/10/2020	69.00	2.98	131,164	362
29/10/2020	86.86	3.69	131,776	363
30/10/2020	29.64	1.03	50,964	226
31/10/2020	0.00	0.09	-	-
1/11/2020	0.00	0.00	-	-
2/11/2020	13.06	1.87	19,244	139
3/11/2020	100.37	4.17	182,316	427
4/11/2020	10.21	2.18	24,544	157
5/11/2020	64.37	3.62	102,308	320
6/11/2020	63.11	2.82	125,408	354
7/11/2020	0.00	0.00	8	3
8/11/2020	0.00	0.00	-	-
9/11/2020	40.87	2.23	100,836	318
10/11/2020	115.26	4.29	210,992	459
11/11/2020	65.88	3.98	125,112	354
12/11/2020	51.72	3.91	119,020	345
13/11/2020	35.30	3.42	88,676	298
14/11/2020	0.00	0.00	-	-
15/11/2020	0.00	0.00	-	-
16/11/2020	33.77	2.12	83,884	290
17/11/2020	34.65	2.94	91,956	303
18/11/2020	30.58	2.49	72,892	270
19/11/2020	50.77	3.64	104,476	323
20/11/2020	50.96	3.14	109,504	331

Date	Gas consumption (GJ)	Electricity consumption (MWh)	Production (kg)	Square root of production
21/11/2020	0.00	0.00	16	4
22/11/2020	0.00	0.00	-	-
23/11/2020	11.46	1.03	23,564	154
24/11/2020	63.24	3.44	136,792	370
25/11/2020	92.73	4.14	191,240	437
26/11/2020	59.49	2.44	119,560	346
27/11/2020	45.80	3.70	90,688	301
28/11/2020	0.00	0.00	-	-
29/11/2020	0.00	0.00	-	-
30/11/2020	31.986	1.7	72,672	270

Appendix D2: Determination of normalised savings for each observation

Table 13 Normalised **gas savings** each day of the normal year

Date	Production (kg)	Adjusted baseline gas use (GJ)	Adjusted reporting gas use (GJ)	Normalised gas savings (GJ)
1/01/2020	-	2.17	0.85	1.32
2/01/2020	41,508	26.64	20.83	5.81
3/01/2020	215,584	129.29	104.66	24.63
4/01/2020	1,372	2.98	1.51	1.47
5/01/2020	-	2.17	0.85	1.32
6/01/2020	119,968	72.91	58.62	14.29
7/01/2020	142,333	86.10	69.39	16.71
8/01/2020	111,684	68.02	54.63	13.40
9/01/2020	171,564	103.33	83.46	19.87
10/01/2020	32,609	21.40	16.55	4.85
11/01/2020	-	2.17	0.85	1.32
12/01/2020	-	2.17	0.85	1.32
13/01/2020	54,513	34.31	27.10	7.22
14/01/2020	77,971	48.15	38.39	9.75
15/01/2020	29,168	19.37	14.89	4.48
16/01/2020	78,212	48.29	38.51	9.78
17/01/2020	102,513	62.62	50.21	12.40
18/01/2020	-	2.17	0.85	1.32
19/01/2020	20,960	14.53	10.94	3.59
20/01/2020	166,350	100.26	80.95	19.31

Date	Production (kg)	Adjusted baseline gas use (GJ)	Adjusted reporting gas use (GJ)	Normalised gas savings (GJ)
21/01/2020	31,739	20.88	16.13	4.75
22/01/2020	73,976	45.79	36.47	9.32
23/01/2020	165,291	99.63	80.44	19.19
24/01/2020	40,842	26.25	20.51	5.74
25/01/2020	-	2.17	0.85	1.32
26/01/2020	-	2.17	0.85	1.32
27/01/2020	-	2.17	0.85	1.32
28/01/2020	93,448	57.27	45.85	11.42
29/01/2020	182,454	109.75	88.71	21.05
30/01/2020	74,154	45.89	36.56	9.34
31/01/2020	143,940	87.04	70.16	16.88
1/02/2020	15,392	11.24	8.26	2.99
2/02/2020	-	2.17	0.85	1.32
3/02/2020	1,744	3.20	1.69	1.51
4/02/2020	126,618	76.83	61.82	15.01
5/02/2020	106,512	64.97	52.14	12.84
6/02/2020	106,292	64.84	52.03	12.81
7/02/2020	53,236	33.56	26.48	7.08
8/02/2020	-	2.17	0.85	1.32
9/02/2020	-	2.17	0.85	1.32
10/02/2020	75,686	46.80	37.29	9.50
11/02/2020	116,832	71.06	57.11	13.95
12/02/2020	133,144	80.68	64.96	15.72
13/02/2020	157,128	94.82	76.51	18.31

Date	Production (kg)	Adjusted baseline gas use (GJ)	Adjusted reporting gas use (GJ)	Normalised gas savings (GJ)
14/02/2020	-	2.17	0.85	1.32
15/02/2020	-	2.17	0.85	1.32
16/02/2020	-	2.17	0.85	1.32
17/02/2020	11,134	8.73	6.21	2.53
18/02/2020	75,312	46.58	37.11	9.46
19/02/2020	186,912	112.38	90.85	21.53
20/02/2020	185,330	111.45	90.09	21.36
21/02/2020	81,802	50.40	40.24	10.17
22/02/2020	-	2.17	0.85	1.32
23/02/2020	-	2.17	0.85	1.32
24/02/2020	57,760	36.23	28.66	7.57
25/02/2020	132,316	80.19	64.56	15.63
26/02/2020	126,826	76.95	61.92	15.03
27/02/2020	163,088	98.34	79.38	18.95
28/02/2020	159,044	95.95	77.43	18.52
29/02/2020	-	2.17	0.85	1.32
1/03/2020	-	2.17	0.85	1.32
2/03/2020	95,960	58.75	47.06	11.70
3/03/2020	116,524	70.88	56.96	13.92
4/03/2020	90,194	55.35	44.28	11.07
5/03/2020	87,298	53.64	42.88	10.76
6/03/2020	149,186	90.14	72.69	17.45
7/03/2020	-	2.17	0.85	1.32
8/03/2020	26,166	17.60	13.45	4.15

Date	Production (kg)	Adjusted baseline gas use (GJ)	Adjusted reporting gas use (GJ)	Normalised gas savings (GJ)
9/03/2020	97,512	59.67	47.80	11.86
10/03/2020	137,760	83.40	67.18	16.22
11/03/2020	214,840	128.85	104.30	24.55
12/03/2020	188,966	113.59	91.84	21.75
13/03/2020	218,078	130.76	105.86	24.90
14/03/2020	14	2.18	0.85	1.32
15/03/2020	-	2.17	0.85	1.32
16/03/2020	114,746	69.83	56.10	13.73
17/03/2020	194,800	117.03	94.65	22.38
18/03/2020	195,182	117.26	94.84	22.42
19/03/2020	114,444	69.65	55.96	13.69
20/03/2020	185,342	111.46	90.10	21.36
21/03/2020	-	2.17	0.85	1.32
22/03/2020	-	2.17	0.85	1.32
23/03/2020	112,068	68.25	54.81	13.44
24/03/2020	224,778	134.71	109.09	25.62
25/03/2020	189,966	114.18	92.32	21.86
26/03/2020	121,238	73.66	59.23	14.43
27/03/2020	110,936	67.58	54.27	13.32
28/03/2020	-	2.17	0.85	1.32
29/03/2020	-	2.17	0.85	1.32
30/03/2020	121,820	74.00	59.51	14.49
31/03/2020	219,746	131.74	106.67	25.08
1/04/2020	212,916	127.72	103.38	24.34

Date	Production (kg)	Adjusted baseline gas use (GJ)	Adjusted reporting gas use (GJ)	Normalised gas savings (GJ)
2/04/2020	135,006	81.78	65.86	15.92
3/04/2020	135,362	81.99	66.03	15.96
4/04/2020	-	2.17	0.85	1.32
5/04/2020	-	2.17	0.85	1.32
6/04/2020	81,612	50.29	40.15	10.15
7/04/2020	203,230	122.01	98.71	23.29
8/04/2020	183,110	110.14	89.02	21.12
9/04/2020	162,758	98.14	79.22	18.92
10/04/2020	243,868	145.97	118.28	27.69
11/04/2020	-	2.17	0.85	1.32
12/04/2020	-	2.17	0.85	1.32
13/04/2020	-	2.17	0.85	1.32
14/04/2020	109,158	66.53	53.41	13.12
15/04/2020	158,130	95.41	76.99	18.42
16/04/2020	94,508	57.90	46.36	11.54
17/04/2020	50,180	31.76	25.01	6.75
18/04/2020	-	2.17	0.85	1.32
19/04/2020	-	2.17	0.85	1.32
20/04/2020	113,898	69.33	55.69	13.64
21/04/2020	141,380	85.53	68.93	16.61
22/04/2020	135,994	82.36	66.33	16.02
23/04/2020	39,060	25.20	19.66	5.55
24/04/2020	100,270	61.29	49.13	12.16
25/04/2020	5,588	5.46	3.54	1.93

Date	Production (kg)	Adjusted baseline gas use (GJ)	Adjusted reporting gas use (GJ)	Normalised gas savings (GJ)
26/04/2020	8	2.17	0.85	1.32
27/04/2020	29,260	19.42	14.94	4.49
28/04/2020	163,652	98.67	79.65	19.01
29/04/2020	108,442	66.11	53.07	13.05
30/04/2020	247,606	148.17	120.08	28.09
1/05/2020	155,568	93.90	75.76	18.14
2/05/2020	-	2.17	0.85	1.32
3/05/2020	-	2.17	0.85	1.32
4/05/2020	33,654	22.01	17.05	4.96
5/05/2020	86,608	53.24	42.55	10.69
6/05/2020	109,256	66.59	53.46	13.13
7/05/2020	158,858	95.84	77.34	18.50
8/05/2020	169,082	101.87	82.27	19.60
9/05/2020	-	2.17	0.85	1.32
10/05/2020	27,678	18.49	14.17	4.31
11/05/2020	170,960	102.98	83.17	19.80
12/05/2020	125,172	75.98	61.12	14.85
13/05/2020	77,930	48.12	38.37	9.75
14/05/2020	140,662	85.11	68.58	16.53
15/05/2020	127,758	77.50	62.37	15.13
16/05/2020	-	2.17	0.85	1.32
17/05/2020	-	2.17	0.85	1.32
18/05/2020	72,528	44.94	35.77	9.16
19/05/2020	117,872	71.67	57.61	14.07

Date	Production (kg)	Adjusted baseline gas use (GJ)	Adjusted reporting gas use (GJ)	Normalised gas savings (GJ)
20/05/2020	79,676	49.15	39.21	9.94
21/05/2020	134,050	81.21	65.40	15.81
22/05/2020	91,960	56.39	45.13	11.26
23/05/2020	-	2.17	0.85	1.32
24/05/2020	-	2.17	0.85	1.32
25/05/2020	92,994	57.00	45.63	11.38
26/05/2020	128,746	78.09	62.84	15.24
27/05/2020	209,300	125.58	101.64	23.95
28/05/2020	34,934	22.77	17.67	5.10
29/05/2020	-	2.17	0.85	1.32
30/05/2020	-	2.17	0.85	1.32
31/05/2020	-	2.17	0.85	1.32
1/06/2020	99,152	60.63	48.59	12.04
2/06/2020	165,914	100.00	80.74	19.26
3/06/2020	63,468	39.59	31.41	8.18
4/06/2020	76,490	47.27	37.68	9.59
5/06/2020	6	2.17	0.85	1.32
6/06/2020	-	2.17	0.85	1.32
7/06/2020	-	2.17	0.85	1.32
8/06/2020	-	2.17	0.85	1.32
9/06/2020	109,128	66.52	53.40	13.12
10/06/2020	237,278	142.08	115.11	26.97
11/06/2020	127,546	77.38	62.27	15.11
12/06/2020	140,860	85.23	68.68	16.55

Date	Production (kg)	Adjusted baseline gas use (GJ)	Adjusted reporting gas use (GJ)	Normalised gas savings (GJ)
13/06/2020	-	2.17	0.85	1.32
14/06/2020	-	2.17	0.85	1.32
15/06/2020	95,552	58.51	46.86	11.65
16/06/2020	142,082	85.95	69.27	16.68
17/06/2020	66,086	41.14	32.67	8.47
18/06/2020	217,498	130.42	105.58	24.84
19/06/2020	142,162	86.00	69.30	16.69
20/06/2020	-	2.17	0.85	1.32
21/06/2020	-	2.17	0.85	1.32
22/06/2020	104,986	64.07	51.40	12.67
23/06/2020	223,504	133.96	108.48	25.49
24/06/2020	133,564	80.93	65.16	15.76
25/06/2020	109,846	66.94	53.74	13.20
26/06/2020	93,184	57.12	45.72	11.40
27/06/2020	-	2.17	0.85	1.32
28/06/2020	-	2.17	0.85	1.32
29/06/2020	43,180	27.63	21.64	5.99
30/06/2020	24,594	16.67	12.69	3.98
1/07/2020	124,690	75.69	60.89	14.80
2/07/2020	141,540	85.63	69.01	16.62
3/07/2020	90,166	55.34	44.27	11.07
4/07/2020	-	2.17	0.85	1.32
5/07/2020	-	2.17	0.85	1.32
6/07/2020	115,718	70.40	56.57	13.83

Date	Production (kg)	Adjusted baseline gas use (GJ)	Adjusted reporting gas use (GJ)	Normalised gas savings (GJ)
7/07/2020	126,528	76.78	61.78	15.00
8/07/2020	91,774	56.28	45.04	11.24
9/07/2020	80,000	49.34	39.37	9.97
10/07/2020	132,372	80.22	64.59	15.63
11/07/2020	-	2.17	0.85	1.32
12/07/2020	-	2.17	0.85	1.32
13/07/2020	122,548	74.43	59.86	14.57
14/07/2020	206,900	124.17	100.48	23.69
15/07/2020	81,274	50.09	39.98	10.11
16/07/2020	32,490	21.33	16.49	4.83
17/07/2020	114,224	69.52	55.85	13.67
18/07/2020	-	2.17	0.85	1.32
19/07/2020	-	2.17	0.85	1.32
20/07/2020	76,856	47.49	37.86	9.63
21/07/2020	152,796	92.27	74.43	17.84
22/07/2020	124,074	75.33	60.59	14.74
23/07/2020	116,482	70.85	56.94	13.92
24/07/2020	121,158	73.61	59.19	14.42
25/07/2020	-	2.17	0.85	1.32
26/07/2020	-	2.17	0.85	1.32
27/07/2020	111,458	67.89	54.52	13.37
28/07/2020	181,166	109.00	88.09	20.91
29/07/2020	148,704	89.85	72.46	17.40
30/07/2020	126,766	76.92	61.89	15.03

Date	Production (kg)	Adjusted baseline gas use (GJ)	Adjusted reporting gas use (GJ)	Normalised gas savings (GJ)
31/07/2020	75,664	46.78	37.28	9.50
1/08/2020	-	2.17	0.85	1.32
2/08/2020	-	2.17	0.85	1.32
3/08/2020	109,834	66.93	53.74	13.20
4/08/2020	154,506	93.27	75.25	18.03
5/08/2020	83,034	51.13	40.83	10.30
6/08/2020	164,746	99.31	80.18	19.13
7/08/2020	28,804	19.15	14.72	4.44
8/08/2020	-	2.17	0.85	1.32
9/08/2020	-	2.17	0.85	1.32
10/08/2020	138,576	83.88	67.58	16.30
11/08/2020	241,500	144.57	117.14	27.43
12/08/2020	127,504	77.35	62.25	15.11
13/08/2020	160,892	97.04	78.32	18.72
14/08/2020	89,664	55.04	44.02	11.02
15/08/2020	-	2.17	0.85	1.32
16/08/2020	-	2.17	0.85	1.32
17/08/2020	15,444	11.28	8.28	2.99
18/08/2020	98,404	60.19	48.23	11.96
19/08/2020	186,280	112.01	90.55	21.46
20/08/2020	203,496	122.16	98.84	23.32
21/08/2020	164,444	99.13	80.03	19.10
22/08/2020	-	2.17	0.85	1.32
23/08/2020	-	2.17	0.85	1.32

Date	Production (kg)	Adjusted baseline gas use (GJ)	Adjusted reporting gas use (GJ)	Normalised gas savings (GJ)
24/08/2020	137,844	83.45	67.23	16.22
25/08/2020	161,920	97.65	78.82	18.83
26/08/2020	205,336	123.25	99.73	23.52
27/08/2020	199,984	120.09	97.15	22.94
28/08/2020	53,352	33.63	26.54	7.09
29/08/2020	-	2.17	0.85	1.32
30/08/2020	-	2.17	0.85	1.32
31/08/2020	106,964	65.24	52.36	12.89
1/09/2020	176,952	106.51	86.06	20.45
2/09/2020	167,324	100.83	81.42	19.41
3/09/2020	228,540	136.93	110.90	26.03
4/09/2020	62,764	39.18	31.07	8.11
5/09/2020	-	2.17	0.85	1.32
6/09/2020	-	2.17	0.85	1.32
7/09/2020	62,688	39.13	31.03	8.10
8/09/2020	237,056	141.95	115.00	26.95
9/09/2020	101,120	61.80	49.54	12.25
10/09/2020	-	2.17	0.85	1.32
11/09/2020	-	2.17	0.85	1.32
12/09/2020	-	2.17	0.85	1.32
13/09/2020	-	2.17	0.85	1.32
14/09/2020	2,060	3.38	1.84	1.55
15/09/2020	204,460	122.73	99.30	23.43
16/09/2020	139,016	84.14	67.79	16.35

Date	Production (kg)	Adjusted baseline gas use (GJ)	Adjusted reporting gas use (GJ)	Normalised gas savings (GJ)
17/09/2020	114,328	69.58	55.90	13.68
18/09/2020	113,296	68.97	55.40	13.57
19/09/2020	4	2.17	0.85	1.32
20/09/2020	-	2.17	0.85	1.32
21/09/2020	56,212	35.31	27.92	7.40
22/09/2020	168,832	101.72	82.15	19.57
23/09/2020	71,588	44.38	35.32	9.06
24/09/2020	14,964	10.99	8.05	2.94
25/09/2020	93,152	57.10	45.70	11.39
26/09/2020	652	2.55	1.16	1.39
27/09/2020	2,900	3.88	2.24	1.64
28/09/2020	155,208	93.69	75.59	18.10
29/09/2020	42,028	26.95	21.08	5.87
30/09/2020	-	2.17	0.85	1.32
1/10/2020	200,212	120.23	97.26	22.97
2/10/2020	101,704	62.14	49.82	12.32
3/10/2020	-	2.17	0.85	1.32
4/10/2020	-	2.17	0.85	1.32
5/10/2020	41,300	26.52	20.73	5.79
6/10/2020	51,572	32.58	25.68	6.90
7/10/2020	167,328	100.84	81.42	19.41
8/10/2020	143,956	87.05	70.17	16.89
9/10/2020	133,536	80.91	65.15	15.76
10/10/2020	-	2.17	0.85	1.32

Date	Production (kg)	Adjusted baseline gas use (GJ)	Adjusted reporting gas use (GJ)	Normalised gas savings (GJ)
11/10/2020	-	2.17	0.85	1.32
12/10/2020	134,616	81.55	65.67	15.88
13/10/2020	140,636	85.10	68.57	16.53
14/10/2020	96,072	58.82	47.11	11.71
15/10/2020	190,408	114.44	92.54	21.91
16/10/2020	180,432	108.56	87.73	20.83
17/10/2020	8	2.17	0.85	1.32
18/10/2020	-	2.17	0.85	1.32
19/10/2020	95,156	58.28	46.67	11.61
20/10/2020	187,000	112.44	90.90	21.54
21/10/2020	110,192	67.14	53.91	13.24
22/10/2020	154,040	93.00	75.02	17.98
23/10/2020	126,584	76.81	61.80	15.01
24/10/2020	-	2.17	0.85	1.32
25/10/2020	-	2.17	0.85	1.32
26/10/2020	78,548	48.49	38.67	9.81
27/10/2020	110,212	67.16	53.92	13.24
28/10/2020	131,164	79.51	64.01	15.50
29/10/2020	131,776	79.87	64.30	15.57
30/10/2020	50,964	32.22	25.39	6.83
31/10/2020	-	2.17	0.85	1.32
1/11/2020	-	2.17	0.85	1.32
2/11/2020	19,244	13.52	10.11	3.40
3/11/2020	182,316	109.67	88.64	21.03

Date	Production (kg)	Adjusted baseline gas use (GJ)	Adjusted reporting gas use (GJ)	Normalised gas savings (GJ)
4/11/2020	24,544	16.64	12.67	3.98
5/11/2020	102,308	62.50	50.11	12.38
6/11/2020	125,408	76.12	61.24	14.88
7/11/2020	8	2.17	0.85	1.32
8/11/2020	-	2.17	0.85	1.32
9/11/2020	100,836	61.63	49.40	12.22
10/11/2020	210,992	126.58	102.45	24.13
11/11/2020	125,112	75.94	61.09	14.85
12/11/2020	119,020	72.35	58.16	14.19
13/11/2020	88,676	54.46	43.55	10.91
14/11/2020	-	2.17	0.85	1.32
15/11/2020	-	2.17	0.85	1.32
16/11/2020	83,884	51.63	41.24	10.39
17/11/2020	91,956	56.39	45.13	11.26
18/11/2020	72,892	45.15	35.95	9.20
19/11/2020	104,476	63.77	51.16	12.62
20/11/2020	109,504	66.74	53.58	13.16
21/11/2020	16	2.18	0.85	1.32
22/11/2020	-	2.17	0.85	1.32
23/11/2020	23,564	16.06	12.19	3.87
24/11/2020	136,792	82.83	66.72	16.11
25/11/2020	191,240	114.94	92.94	22.00
26/11/2020	119,560	72.67	58.42	14.25
27/11/2020	90,688	55.64	44.52	11.13

Date	Production (kg)	Adjusted baseline gas use (GJ)	Adjusted reporting gas use (GJ)	Normalised gas savings (GJ)
28/11/2020	-	2.17	0.85	1.32
29/11/2020	-	2.17	0.85	1.32
30/11/2020	72,672	45.02	35.84	9.18
1/12/2020	146,380	88.48	71.34	17.15
2/12/2020	161,448	97.37	78.59	18.78
3/12/2020	116,960	71.14	57.17	13.97
4/12/2020	113,724	69.23	55.61	13.62
5/12/2020	-	2.17	0.85	1.32
6/12/2020	23,304	15.91	12.07	3.84
7/12/2020	215,768	129.40	104.75	24.65
8/12/2020	149,232	90.16	72.71	17.46
9/12/2020	134,208	81.31	65.47	15.83
10/12/2020	64,540	40.23	31.93	8.30
11/12/2020	57,004	35.78	28.30	7.49
12/12/2020	-	2.17	0.85	1.32
13/12/2020	-	2.17	0.85	1.32
14/12/2020	71,248	44.18	35.16	9.02
15/12/2020	123,604	75.05	60.37	14.69
16/12/2020	145,768	88.12	71.04	17.08
17/12/2020	173,888	104.70	84.58	20.12
18/12/2020	107,600	65.62	52.66	12.95
19/12/2020	-	2.17	0.85	1.32
20/12/2020	-	2.17	0.85	1.32
21/12/2020	100,544	61.46	49.26	12.19

Date	Production (kg)	Adjusted baseline gas use (GJ)	Adjusted reporting gas use (GJ)	Normalised gas savings (GJ)
22/12/2020	11,240	8.80	6.26	2.54
23/12/2020	-	2.17	0.85	1.32
24/12/2020	-	2.17	0.85	1.32
25/12/2020	-	2.17	0.85	1.32
26/12/2020	-	2.17	0.85	1.32
27/12/2020	-	2.17	0.85	1.32
28/12/2020	-	2.17	0.85	1.32
29/12/2020	-	2.17	0.85	1.32
30/12/2020	4,356	4.74	2.94	1.79
31/12/2020	96,012	58.78	47.08	11.70

Table 14 Normalised electricity savings each day of the normal year

Date	Square root of production (kg)	Adjusted baseline electricity (MWh)	Adjusted reporting electricity (MWh)	Normalised savings (MWh)
1/01/2020	-	0.146	0.103	0.043
2/01/2020	204	2.761	2.044	0.717
3/01/2020	464	6.106	4.528	1.578
4/01/2020	37	0.621	0.456	0.166
5/01/2020	-	0.146	0.103	0.043
6/01/2020	346	4.592	3.404	1.188
7/01/2020	377	4.989	3.698	1.291
8/01/2020	334	4.436	3.288	1.148
9/01/2020	414	5.463	4.050	1.413
10/01/2020	181	2.464	1.824	0.640
11/01/2020	-	0.146	0.103	0.043
12/01/2020	-	0.146	0.103	0.043
13/01/2020	233	3.143	2.328	0.815
14/01/2020	279	3.730	2.764	0.966
15/01/2020	171	2.338	1.730	0.608
16/01/2020	280	3.736	2.768	0.968
17/01/2020	320	4.256	3.154	1.102
18/01/2020	-	0.146	0.103	0.043
19/01/2020	145	2.004	1.483	0.522
20/01/2020	408	5.382	3.990	1.392
21/01/2020	178	2.433	1.801	0.632
22/01/2020	272	3.637	2.695	0.942

Date	Square root of production (kg)	Adjusted baseline electricity (MWh)	Adjusted reporting electricity (MWh)	Normalised savings (MWh)
23/01/2020	407	5.365	3.977	1.388
24/01/2020	202	2.740	2.029	0.711
25/01/2020	-	0.146	0.103	0.043
26/01/2020	-	0.146	0.103	0.043
27/01/2020	-	0.146	0.103	0.043
28/01/2020	306	4.070	3.016	1.054
29/01/2020	427	5.629	4.174	1.456
30/01/2020	272	3.642	2.698	0.944
31/01/2020	379	5.016	3.718	1.298
1/02/2020	124	1.738	1.285	0.453
2/02/2020	-	0.146	0.103	0.043
3/02/2020	42	0.682	0.501	0.181
4/02/2020	356	4.714	3.494	1.220
5/02/2020	326	4.335	3.213	1.122
6/02/2020	326	4.331	3.210	1.121
7/02/2020	231	3.108	2.302	0.806
8/02/2020	-	0.146	0.103	0.043
9/02/2020	-	0.146	0.103	0.043
10/02/2020	275	3.677	2.725	0.953
11/02/2020	342	4.534	3.360	1.173
12/02/2020	365	4.830	3.580	1.250
13/02/2020	396	5.234	3.880	1.354
14/02/2020	-	0.146	0.103	0.043

Date	Square root of production (kg)	Adjusted baseline electricity (MWh)	Adjusted reporting electricity (MWh)	Normalised savings (MWh)
15/02/2020	-	0.146	0.103	0.043
16/02/2020	-	0.146	0.103	0.043
17/02/2020	106	1.500	1.108	0.392
18/02/2020	274	3.669	2.718	0.951
19/02/2020	432	5.696	4.223	1.473
20/02/2020	430	5.672	4.206	1.467
21/02/2020	286	3.817	2.829	0.989
22/02/2020	-	0.146	0.103	0.043
23/02/2020	-	0.146	0.103	0.043
24/02/2020	240	3.231	2.393	0.838
25/02/2020	364	4.815	3.569	1.246
26/02/2020	356	4.717	3.497	1.221
27/02/2020	404	5.330	3.951	1.379
28/02/2020	399	5.265	3.903	1.362
29/02/2020	-	0.146	0.103	0.043
1/03/2020	-	0.146	0.103	0.043
2/03/2020	310	4.122	3.055	1.067
3/03/2020	341	4.528	3.356	1.172
4/03/2020	300	4.001	2.965	1.036
5/03/2020	295	3.939	2.919	1.020
6/03/2020	386	5.104	3.784	1.320
7/03/2020	-	0.146	0.103	0.043
8/03/2020	162	2.222	1.644	0.578

Date	Square root of production (kg)	Adjusted baseline electricity (MWh)	Adjusted reporting electricity (MWh)	Normalised savings (MWh)
9/03/2020	312	4.154	3.079	1.076
10/03/2020	371	4.910	3.640	1.270
11/03/2020	464	6.096	4.520	1.576
12/03/2020	435	5.726	4.246	1.481
13/03/2020	467	6.141	4.553	1.587
14/03/2020	4	0.194	0.139	0.055
15/03/2020	-	0.146	0.103	0.043
16/03/2020	339	4.494	3.331	1.163
17/03/2020	441	5.812	4.309	1.503
18/03/2020	442	5.817	4.313	1.504
19/03/2020	338	4.489	3.327	1.162
20/03/2020	431	5.672	4.206	1.467
21/03/2020	-	0.146	0.103	0.043
22/03/2020	-	0.146	0.103	0.043
23/03/2020	335	4.443	3.293	1.150
24/03/2020	474	6.232	4.621	1.611
25/03/2020	436	5.741	4.257	1.484
26/03/2020	348	4.616	3.421	1.194
27/03/2020	333	4.422	3.277	1.144
28/03/2020	-	0.146	0.103	0.043
29/03/2020	-	0.146	0.103	0.043
30/03/2020	349	4.626	3.429	1.197
31/03/2020	469	6.163	4.570	1.593

Date	Square root of production (kg)	Adjusted baseline electricity (MWh)	Adjusted reporting electricity (MWh)	Normalised savings (MWh)
1/04/2020	461	6.069	4.500	1.569
2/04/2020	367	4.863	3.604	1.258
3/04/2020	368	4.869	3.609	1.260
4/04/2020	-	0.146	0.103	0.043
5/04/2020	-	0.146	0.103	0.043
6/04/2020	286	3.813	2.825	0.988
7/04/2020	451	5.933	4.399	1.534
8/04/2020	428	5.639	4.181	1.458
9/04/2020	403	5.325	3.948	1.377
10/04/2020	494	6.485	4.809	1.676
11/04/2020	-	0.146	0.103	0.043
12/04/2020	-	0.146	0.103	0.043
13/04/2020	-	0.146	0.103	0.043
14/04/2020	330	4.387	3.251	1.136
15/04/2020	398	5.251	3.893	1.358
16/04/2020	307	4.092	3.033	1.060
17/04/2020	224	3.021	2.238	0.784
18/04/2020	-	0.146	0.103	0.043
19/04/2020	-	0.146	0.103	0.043
20/04/2020	337	4.478	3.319	1.159
21/04/2020	376	4.973	3.686	1.286
22/04/2020	369	4.880	3.617	1.263
23/04/2020	198	2.683	1.986	0.697

Date	Square root of production (kg)	Adjusted baseline electricity (MWh)	Adjusted reporting electricity (MWh)	Normalised savings (MWh)
24/04/2020	317	4.211	3.121	1.090
25/04/2020	75	1.105	0.815	0.290
26/04/2020	3	0.182	0.130	0.052
27/04/2020	171	2.342	1.733	0.609
28/04/2020	405	5.339	3.958	1.381
29/04/2020	329	4.373	3.241	1.132
30/04/2020	498	6.534	4.845	1.689
1/05/2020	394	5.209	3.862	1.347
2/05/2020	-	0.146	0.103	0.043
3/05/2020	-	0.146	0.103	0.043
4/05/2020	183	2.501	1.851	0.650
5/05/2020	294	3.924	2.907	1.016
6/05/2020	331	4.389	3.253	1.136
7/05/2020	399	5.262	3.901	1.361
8/05/2020	411	5.424	4.022	1.403
9/05/2020	-	0.146	0.103	0.043
10/05/2020	166	2.282	1.688	0.593
11/05/2020	413	5.454	4.043	1.410
12/05/2020	354	4.688	3.475	1.213
13/05/2020	279	3.729	2.763	0.966
14/05/2020	375	4.960	3.677	1.283
15/05/2020	357	4.734	3.509	1.225
16/05/2020	-	0.146	0.103	0.043

Date	Square root of production (kg)	Adjusted baseline electricity (MWh)	Adjusted reporting electricity (MWh)	Normalised savings (MWh)
17/05/2020	-	0.146	0.103	0.043
18/05/2020	269	3.603	2.669	0.934
19/05/2020	343	4.553	3.375	1.178
20/05/2020	282	3.769	2.793	0.976
21/05/2020	366	4.846	3.592	1.254
22/05/2020	303	4.039	2.993	1.046
23/05/2020	-	0.146	0.103	0.043
24/05/2020	-	0.146	0.103	0.043
25/05/2020	305	4.061	3.009	1.051
26/05/2020	359	4.752	3.522	1.230
27/05/2020	457	6.019	4.463	1.556
28/05/2020	187	2.545	1.884	0.661
29/05/2020	-	0.146	0.103	0.043
30/05/2020	-	0.146	0.103	0.043
31/05/2020	-	0.146	0.103	0.043
1/06/2020	315	4.188	3.104	1.084
2/06/2020	407	5.375	3.985	1.390
3/06/2020	252	3.380	2.504	0.876
4/06/2020	277	3.696	2.739	0.958
5/06/2020	2	0.177	0.126	0.051
6/06/2020	-	0.146	0.103	0.043
7/06/2020	-	0.146	0.103	0.043
8/06/2020	-	0.146	0.103	0.043

Date	Square root of production (kg)	Adjusted baseline electricity (MWh)	Adjusted reporting electricity (MWh)	Normalised savings (MWh)
9/06/2020	330	4.387	3.251	1.135
10/06/2020	487	6.399	4.745	1.654
11/06/2020	357	4.730	3.506	1.224
12/06/2020	375	4.964	3.680	1.284
13/06/2020	-	0.146	0.103	0.043
14/06/2020	-	0.146	0.103	0.043
15/06/2020	309	4.114	3.049	1.065
16/06/2020	377	4.985	3.695	1.290
17/06/2020	257	3.446	2.553	0.893
18/06/2020	466	6.133	4.547	1.585
19/06/2020	377	4.986	3.696	1.290
20/06/2020	-	0.146	0.103	0.043
21/06/2020	-	0.146	0.103	0.043
22/06/2020	324	4.305	3.191	1.115
23/06/2020	473	6.215	4.608	1.606
24/06/2020	365	4.837	3.586	1.252
25/06/2020	331	4.400	3.261	1.139
26/06/2020	305	4.065	3.012	1.053
27/06/2020	-	0.146	0.103	0.043
28/06/2020	-	0.146	0.103	0.043
29/06/2020	208	2.813	2.083	0.730
30/06/2020	157	2.159	1.597	0.562
1/07/2020	353	4.679	3.468	1.211

Date	Square root of production (kg)	Adjusted baseline electricity (MWh)	Adjusted reporting electricity (MWh)	Normalised savings (MWh)
2/07/2020	376	4.975	3.688	1.287
3/07/2020	300	4.001	2.964	1.036
4/07/2020	-	0.146	0.103	0.043
5/07/2020	-	0.146	0.103	0.043
6/07/2020	340	4.513	3.345	1.168
7/07/2020	356	4.712	3.493	1.219
8/07/2020	303	4.035	2.990	1.045
9/07/2020	283	3.777	2.798	0.978
10/07/2020	364	4.816	3.570	1.246
11/07/2020	-	0.146	0.103	0.043
12/07/2020	-	0.146	0.103	0.043
13/07/2020	350	4.640	3.439	1.201
14/07/2020	455	5.985	4.438	1.547
15/07/2020	285	3.806	2.820	0.986
16/07/2020	180	2.460	1.821	0.639
17/07/2020	338	4.484	3.324	1.161
18/07/2020	-	0.146	0.103	0.043
19/07/2020	-	0.146	0.103	0.043
20/07/2020	277	3.705	2.745	0.960
21/07/2020	391	5.164	3.828	1.336
22/07/2020	352	4.668	3.460	1.208
23/07/2020	341	4.527	3.355	1.172
24/07/2020	348	4.614	3.420	1.194

Date	Square root of production (kg)	Adjusted baseline electricity (MWh)	Adjusted reporting electricity (MWh)	Normalised savings (MWh)
25/07/2020	-	0.146	0.103	0.043
26/07/2020	-	0.146	0.103	0.043
27/07/2020	334	4.432	3.284	1.147
28/07/2020	426	5.610	4.159	1.451
29/07/2020	386	5.096	3.778	1.318
30/07/2020	356	4.716	3.496	1.220
31/07/2020	275	3.677	2.724	0.953
1/08/2020	-	0.146	0.103	0.043
2/08/2020	-	0.146	0.103	0.043
3/08/2020	331	4.400	3.261	1.139
4/08/2020	393	5.192	3.849	1.343
5/08/2020	288	3.845	2.849	0.996
6/08/2020	406	5.356	3.971	1.385
7/08/2020	170	2.325	1.720	0.604
8/08/2020	-	0.146	0.103	0.043
9/08/2020	-	0.146	0.103	0.043
10/08/2020	372	4.925	3.650	1.274
11/08/2020	491	6.454	4.786	1.668
12/08/2020	357	4.730	3.506	1.224
13/08/2020	401	5.295	3.925	1.369
14/08/2020	299	3.990	2.957	1.033
15/08/2020	-	0.146	0.103	0.043
16/08/2020	-	0.146	0.103	0.043

Date	Square root of production (kg)	Adjusted baseline electricity (MWh)	Adjusted reporting electricity (MWh)	Normalised savings (MWh)
17/08/2020	124	1.741	1.287	0.454
18/08/2020	314	4.173	3.092	1.080
19/08/2020	432	5.686	4.216	1.470
20/08/2020	451	5.937	4.402	1.535
21/08/2020	406	5.352	3.967	1.384
22/08/2020	-	0.146	0.103	0.043
23/08/2020	-	0.146	0.103	0.043
24/08/2020	371	4.912	3.641	1.271
25/08/2020	402	5.311	3.938	1.374
26/08/2020	453	5.963	4.421	1.542
27/08/2020	447	5.887	4.365	1.522
28/08/2020	231	3.111	2.304	0.807
29/08/2020	-	0.146	0.103	0.043
30/08/2020	-	0.146	0.103	0.043
31/08/2020	327	4.344	3.220	1.125
1/09/2020	421	5.546	4.112	1.434
2/09/2020	409	5.397	4.001	1.396
3/09/2020	478	6.283	4.659	1.624
4/09/2020	251	3.362	2.490	0.872
5/09/2020	-	0.146	0.103	0.043
6/09/2020	-	0.146	0.103	0.043
7/09/2020	250	3.360	2.489	0.871
8/09/2020	487	6.396	4.743	1.653

Date	Square root of production (kg)	Adjusted baseline electricity (MWh)	Adjusted reporting electricity (MWh)	Normalised savings (MWh)
9/09/2020	318	4.228	3.133	1.095
10/09/2020	-	0.146	0.103	0.043
11/09/2020	-	0.146	0.103	0.043
12/09/2020	-	0.146	0.103	0.043
13/09/2020	-	0.146	0.103	0.043
14/09/2020	45	0.729	0.535	0.193
15/09/2020	452	5.950	4.412	1.538
16/09/2020	373	4.932	3.656	1.276
17/09/2020	338	4.486	3.325	1.161
18/09/2020	337	4.467	3.311	1.156
19/09/2020	2	0.172	0.122	0.050
20/09/2020	-	0.146	0.103	0.043
21/09/2020	237	3.189	2.362	0.827
22/09/2020	411	5.420	4.019	1.402
23/09/2020	268	3.581	2.653	0.928
24/09/2020	122	1.716	1.269	0.448
25/09/2020	305	4.064	3.011	1.052
26/09/2020	26	0.474	0.346	0.127
27/09/2020	54	0.837	0.616	0.221
28/09/2020	394	5.203	3.857	1.346
29/09/2020	205	2.778	2.057	0.721
30/09/2020	-	0.146	0.103	0.043
1/10/2020	447	5.890	4.367	1.523

Date	Square root of production (kg)	Adjusted baseline electricity (MWh)	Adjusted reporting electricity (MWh)	Normalised savings (MWh)
2/10/2020	319	4.240	3.142	1.098
3/10/2020	-	0.146	0.103	0.043
4/10/2020	-	0.146	0.103	0.043
5/10/2020	203	2.755	2.040	0.715
6/10/2020	227	3.061	2.267	0.794
7/10/2020	409	5.397	4.001	1.396
8/10/2020	379	5.016	3.719	1.298
9/10/2020	365	4.837	3.585	1.251
10/10/2020	-	0.146	0.103	0.043
11/10/2020	-	0.146	0.103	0.043
12/10/2020	367	4.856	3.599	1.256
13/10/2020	375	4.960	3.677	1.283
14/10/2020	310	4.125	3.057	1.068
15/10/2020	436	5.747	4.261	1.486
16/10/2020	425	5.599	4.151	1.448
17/10/2020	3	0.182	0.130	0.052
18/10/2020	-	0.146	0.103	0.043
19/10/2020	308	4.106	3.043	1.063
20/10/2020	432	5.697	4.224	1.473
21/10/2020	332	4.407	3.266	1.141
22/10/2020	392	5.184	3.843	1.341
23/10/2020	356	4.713	3.494	1.220
24/10/2020	-	0.146	0.103	0.043

Date	Square root of production (kg)	Adjusted baseline electricity (MWh)	Adjusted reporting electricity (MWh)	Normalised savings (MWh)
25/10/2020	-	0.146	0.103	0.043
26/10/2020	280	3.744	2.774	0.970
27/10/2020	332	4.408	3.267	1.141
28/10/2020	362	4.795	3.554	1.241
29/10/2020	363	4.806	3.562	1.243
30/10/2020	226	3.044	2.254	0.790
31/10/2020	-	0.146	0.103	0.043
1/11/2020	-	0.146	0.103	0.043
2/11/2020	139	1.927	1.425	0.502
3/11/2020	427	5.627	4.172	1.455
4/11/2020	157	2.157	1.596	0.561
5/11/2020	320	4.252	3.151	1.101
6/11/2020	354	4.692	3.478	1.214
7/11/2020	3	0.182	0.130	0.052
8/11/2020	-	0.146	0.103	0.043
9/11/2020	318	4.222	3.129	1.093
10/11/2020	459	6.042	4.480	1.562
11/11/2020	354	4.686	3.474	1.213
12/11/2020	345	4.575	3.391	1.184
13/11/2020	298	3.969	2.941	1.028
14/11/2020	-	0.146	0.103	0.043
15/11/2020	-	0.146	0.103	0.043
16/11/2020	290	3.864	2.863	1.001

Date	Square root of production (kg)	Adjusted baseline electricity (MWh)	Adjusted reporting electricity (MWh)	Normalised savings (MWh)
17/11/2020	303	4.039	2.993	1.046
18/11/2020	270	3.612	2.676	0.936
19/11/2020	323	4.295	3.183	1.112
20/11/2020	331	4.394	3.256	1.137
21/11/2020	4	0.197	0.141	0.056
22/11/2020	-	0.146	0.103	0.043
23/11/2020	154	2.116	1.566	0.551
24/11/2020	370	4.894	3.628	1.266
25/11/2020	437	5.760	4.270	1.489
26/11/2020	346	4.585	3.398	1.186
27/11/2020	301	4.012	2.973	1.039
28/11/2020	-	0.146	0.103	0.043
29/11/2020	-	0.146	0.103	0.043
30/11/2020	270	3.606	2.672	0.935
1/12/2020	383	5.057	3.749	1.308
2/12/2020	402	5.304	3.932	1.372
3/12/2020	342	4.536	3.362	1.174
4/12/2020	337	4.475	3.317	1.158
5/12/2020	-	0.146	0.103	0.043
6/12/2020	153	2.106	1.558	0.548
7/12/2020	465	6.109	4.530	1.579
8/12/2020	386	5.105	3.784	1.321
9/12/2020	366	4.849	3.594	1.255

Date	Square root of production (kg)	Adjusted baseline electricity (MWh)	Adjusted reporting electricity (MWh)	Normalised savings (MWh)
10/12/2020	254	3.407	2.524	0.883
11/12/2020	239	3.211	2.378	0.833
12/12/2020	-	0.146	0.103	0.043
13/12/2020	-	0.146	0.103	0.043
14/12/2020	267	3.572	2.647	0.926
15/12/2020	352	4.659	3.453	1.206
16/12/2020	382	5.047	3.741	1.306
17/12/2020	417	5.499	4.077	1.422
18/12/2020	328	4.357	3.229	1.128
19/12/2020	-	0.146	0.103	0.043
20/12/2020	-	0.146	0.103	0.043
21/12/2020	317	4.216	3.125	1.092
22/12/2020	106	1.507	1.113	0.394
23/12/2020	-	0.146	0.103	0.043
24/12/2020	-	0.146	0.103	0.043
25/12/2020	-	0.146	0.103	0.043
26/12/2020	-	0.146	0.103	0.043
27/12/2020	-	0.146	0.103	0.043
28/12/2020	-	0.146	0.103	0.043
29/12/2020	-	0.146	0.103	0.043
30/12/2020	66	0.993	0.732	0.261
31/12/2020	310	4.124	3.056	1.068



For more information on the Energy Security Safeguard

Visit: www.energy.nsw.gov.au

Email: sustainability@environment.nsw.gov.au