



Project Acronym: SERVE
REF EC: (Project Number)
TREN07/FP6EN/S.07.71106/038382
REF (project coordinator org.):
DOCUMENT: Specification for Green
Electricity Purchasing
REF.: Deliverable 7.1

Project Coordinator: Seamus Hoyne
Project coordination org.: Tipperary
Rural and Business Development
Institute
Date: 3 December 2009
Revision: 2.0

Deliverable Report
Deliverable No.: 7.1
Work Package No: 7

CONCERTO INITIATIVE
SERVE

**Sustainable Energy for the Rural Village
Environment**

Report Title:

Specification for Green Electricity Purchasing

Date: 3 December 2009

Author: Christine Barbier, Senergy Econnect

Version: 2.0



CONCERTO is co-funded by the European Commission

Table of contents

TABLE OF CONTENTS	2
1 INTRODUCTION	3
1.1 REFERENCES	3
2 CHANGE TO SCOPE OF WORKS	3
3 SPECIFIC ELECTRICITY CONSUMPTION IN IRELAND	4
4 APPENDIX 1: SPECIFICATION FOR GREEN ELECTRICITY PURCHASING	5

1 Introduction

Work package 7 (WP7) within the SERVE Project focuses on specific research related to sustainable electricity supply. The main objective of this research is to investigate and make recommendations which will lead to the implementation of methods and technologies to achieve sustainable electricity supplies within the Eco-village, in particular, and also in the wider SERVE Region. The activities include:

- a) Community Purchasing of Energy (SERVE Region)
- b) Local grid development and control (Eco-Village)
- c) Future on-site renewable electricity supply options (Eco-Village)

Work has been progressed on the first objective with the production of this deliverable report which forms Deliverable 7.1. The technical details are attached in Appendix 1, which provides a survey of and recommendation on the green electricity tariff available to the SERVE region. This report has been produced by Senergy Econnect. The report outlines the electricity supply companies that operate in the SERVE region (also in the rest of the Republic of Ireland). There are three companies that provide electricity supply with varying levels of green energy sources in their mix. Each tariff offered to both domestic and commercial customers has been checked and analysed. A range of scenarios has been assessed to work out the cost and carbon emission for a number of typical household electricity consumption profiles in order to easily compare the tariffs.

The next two sections in this report provide further information on two main issues:

- How the original scope of work has been changed and improved due to the evolution of the green electricity supply market in Ireland.
- The application of the technical findings in the Appendix 1 to specific energy consumption patterns in Ireland.

1.1 References

[1] Sustainable Energy Ireland, Energy Policy Statistical Support Unit, "Energy in Ireland 1990 - 2007", 2008 report, December 2008, available on-line at http://www.sei.ie/Publications/Statistics_Publications/Energy_in_Ireland/Energy_in_Ireland_1990-2007.pdf (accessed 3 December 2009)

2 Change to scope of works

The main objective of WP7 is to investigate and make recommendations which will lead to the implementation of methods and technologies to achieve sustainable electricity supplies within the SERVE Region. The easiest way for consumers to achieve this would be to sign up to green electricity tariffs. However at the time that the original scope of works was produced for this task, there was no green electricity tariff available to individual domestic customers in Ireland. The task was therefore formulated to investigate alternative options. This was based on the main idea of developing a scheme for the whole SERVE region, involving the local authority and one or more chosen electricity supplier who would be prepared to supply in bulk to the region outside their normal tariff structure.

At the start of the research task several attempts were made to engage electricity suppliers in such a scheme, without success. Alternatives were also investigated, including the idea of setting up an electricity supply company to provide the SERVE region with green electricity from renewable on-site generation at the Eco-Village. The regulatory barriers and the economic conditions for such a scheme to be developed were significant and the scheme was deemed too impractical to justify proceeding further with it.

Towards the end of Year 1 in the SERVE project this task was put on hold, because there were indications in the industry that new suppliers may be entering the domestic supply market in the foreseeable future. This proved to be true, and Airtricity entered the market during Year 2 of the SERVE project. Three companies now offer electricity supply with varying levels of green energy sources in their mix, providing a potentially more straightforward way to achieve the original objectives of WP7. As a result, this task was changed from its

original scope to a full survey of the electricity tariffs available to domestic and commercial customers in the SERVE region.

Deliverable D7.1 (this report) contains the results of this survey and a recommendation for the way forward. This involves promoting the Airtricity tariff to people in the SERVE region as the best green electricity tariff currently available to them. Appendix 1 details the potential savings in terms of CO₂, and also in financial terms, that can be achieved at present by this switch of supplier.

The next task following the completion of this Deliverable D7.1 will be to draw up a plan to develop material which can be used to encourage customers in the SERVE region to change to a greener electricity tariff. This task in effect replaces the original planned activities, but offers a more straightforward way of achieving the WP7 objectives. The result for the SERVE project will be similar, in that the carbon footprint from electricity for the SERVE region will be significantly reduced.

Also included in the plan will be the assessment of green electricity tariffs for non-residential customers. This will be carried out for a few representative and specific non-residential properties by obtaining actual quotes from the relevant electricity supplier. The results for this small sample will then be used as illustration in the promotion material for non-domestic electricity customers. Appendix 1 provides one of the tariffs available for non-residential customers, and this will be used as a baseline against which the other tariff quotes will be compared.

3 Specific electricity consumption in Ireland

The information in Appendix 1 provides a range of calculated monetary and carbon costs for each of the electricity tariffs available in Ireland at the time of writing of this report. These costs have been calculated for a range of dwelling types, with each type having an assumed annual electricity consumption, expressed in kWh.

These assumed annual electricity consumption profiles were found in a study carried out in the UK (West Midlands area) and do not reflect exactly the average electricity consumption in Ireland. The “Detached House” numbers provided in Appendix 1 of this report are approximately equivalent to the average electricity consumption in Ireland, based on the following statistics provided in a report by Sustainable Energy Ireland [1]:

“In 2007 the “average” dwelling consumed a total of 25,899 kWh of energy based on climate corrected data. This was comprised of 20,395 kWh (79%) in the form of direct fossil fuels and the remainder (5,505 kWh) as electricity.”

This “Detached House” profile should therefore be the principal focus when examining the recommendations in Appendix 1, in order to arrive at an initial evaluation of electricity costs for the SERVE region.

It is worth noting that most households will have access to their historic electricity bills (bi-monthly in Ireland), and therefore will be able to work out exactly how much electricity they have used in the past year. It is thus a practical option to provide a “calculator” for each SERVE household considering changing electricity supplier in order for them to work out the exact costs of switching in monetary and carbon terms, based on the information provided in Appendix 1. Part of the implementation plan for the Green Electricity Purchasing will be to make such a calculator available.

4 Appendix 1: Specification for Green Electricity Purchasing

Tipperary Institute – SERVE

D7.1 Specification for Green Electricity Purchasing

Senergy Econnect project number: 2061

Prepared for	Seamus Hoyne Serve Project Coordinator Tipperary Institute Nenagh Road Thurles Co. Tipperary Ireland
---------------------	------------------------------------------------------------------------------------------------------------------------

	Name	Date	Signature
Prepared By	Francis Shillitoe Stuart Tapson	08 October 2009	<i>S. Tapson</i> <i>[Signature]</i>
Checked By	Christine Barbier	12 October 2009	<i>[Signature]</i>
Approved By	Christine Barbier	13 October 09	<i>[Signature]</i>

Document History		
Issue No	Description	Date
01	Original Document Issue	13 Oct 09
02	Updated reference to the "Halcrow Group Ltd" report on average electricity consumption per dwelling type	03 Dec 09

Executive Summary

SERVE have asked Senergy Econnect to research options for purchasing electricity from green sources. In October 2009 residential customers have a choice of three suppliers: Airtricity, Bord Gáis Energy and ESB Customer Supply. The tariffs offered are the same across each supplier with Airtricity and Bord Gáis Energy offering initial discounts on the ESB Customer Supply prices. There are no 100% renewable tariffs available from any supplier for residential customers. The greenness of a supplier can be determined from the Fuel Mix and CO2 Emission Factors Disclosure (CER 2008). The last published report, which covers 2007, states that Airtricity produced 79% of its electricity from renewable sources, with Bord Gáis and ESB Customer Supply producing 16% and 9% respectively. Thus, for residential customers, the greenest electricity supplier would be Airtricity.

For typical dwelling types (flats, terraced houses, semi-detached houses, and detached houses), the yearly cost of electricity and CO2 emissions can be calculated for each of the suppliers. This is done using the average electricity usage for each dwelling type, the price per kWh of electricity and the CO2 emissions per MWh for the supplier. Bord Gáis Energy is the cheapest of all three suppliers. However the price differential between Bord Gáis and Airtricity is small whilst the CO2 emissions are much higher for Bord Gáis than Airtricity. Given the data available in October 2009, the preferred electricity supplier for the SERVE project for residential customers would be Airtricity.

Business customers have a greater choice of suppliers: Airtricity, Bord Gáis, ESB Customer Supply, Energia, ESB Independent Energy and Vayu. Green tariffs are offered by Airtricity, Energia and ESB Independent Energy. Neither the price nor the actual percentage of the electricity derived from the renewable sources offered for these green tariffs is available on the suppliers' websites. The suppliers would need to be contacted directly to obtain a quotation for a particular business premises. ESB Customer Supply tariff prices are published, and these have been reproduced to assist in comparing and contrasting the range of tariffs and prices available.

Table of Contents

Executive Summary	3
1 Introduction	5
1.1 This document	5
1.2 Acronyms and Abbreviations	5
1.3 References	5
2 Residential Market	7
3 Business Market	11
3.1 Suppliers and Green Tariffs	11
3.2 ESB Customer Supply Tariffs	11
4 Conclusions	15

List of Tables

Table 1 – Fuel mix and CO2 emission disclosures, extracted from CER (2008).	7
Table 2– Residential Tariffs, ESB Customer Supply compared with Airtricity and Bord Gáis Energy	8
Table 3 – ESB Customer Supply average yearly cost and CO2 emissions for dwelling types	9
Table 4 – Airtricity average yearly cost and CO2 emissions for dwelling types	9
Table 5 – Bord Gáis Energy average yearly cost and CO2 emissions for dwelling types.....	9
Table 6 – Annual standing charges from the three Electricity suppliers for Rural 24 Hours tariff ...	10
Table 7 – ESB Customer Supply tariffs available to small and medium sized businesses	12
Table 8 – ESB Customer Supply tariff prices available to businesses with a MIC less than 50kVA13	
Table 9 – ESB Customer Supply tariff prices available to businesses	14

1 Introduction

1.1 This document

This document gives an overview of Ireland’s electricity suppliers’ tariffs and prices for residential and small to medium sized businesses with a particular emphasis on green tariffs.

To Senergy Econnect’s knowledge, the information contained within this report is correct on 1 October 2009. This information will become more out of date as time progresses, with changing electricity tariffs, prices, new fuel mix and CO2 emission disclosures, new suppliers entering the market, and changing government regulations.

All monetary figures are expressed in the Euro currency and are exclusive of VAT which is currently charged at 13.5%.

1.2 Acronyms and Abbreviations

Abbreviation	Description
CER	Commission for Energy Regulation
HV	High Voltage
LV	Low Voltage
MIC	Maximum Import Capacity
MEC	Maximum Export Capacity
MV	Medium Voltage
NQH meter	Non Quarterly Hour meter
PSO	Public Service Obligation
QH meter	Quarterly Hour meter

1.3 References

Airtricity, 2009. *Airtricity – Our Prices* [online]. Available at: http://www.airtricity.com/ireland/for_your_home/our_prices (Accessed: 09 October 2009).

Bord Gáis Energy, 2009. *Bord Gáis Energy - Tariffs Explained* [online]. Available at: http://www.bordgaisenergy.ie/html/residential_electricity (Accessed: 09 October 2009).

CER, 2008. *Fuel Mix and CO2 Emission Factors Disclosure 2007* [online], Available at: <http://www.cer.ie/en/documents-by-year.aspx?year=2008> (Accessed: 16 July 2009).

ESB, 2009. *ESB Customer Supply – Pricing* [online]. Available at: https://www.esb.ie/esbcustomersupply/residential/your_account/pricing.jsp (Accessed: 09 October 2009).

Halcrow Group Ltd, 2007. *Average Energy Consumption for Domestic and Non-Domestic Use* [online]. Available at:

<http://www.wmro.org/resources/res.aspx?p=/CmsResource/resourceFilename/2214/Annex%20A%20Average%20Energy%20Consumption%20Estimates.doc> (Accessed: 03 December 2009).

2 Residential Market

There are three suppliers in the residential market:

- Airtricity
- Bord Gáis Energy
- ESB Customer Supply

These suppliers all offer the same tariffs albeit at different prices: Airtricity and Bord Gáis Energy both offer initial discounts on the ESB Customer Supply price. None of the tariffs offered are green tariffs. Fortunately, the Commission for Energy Regulation (“CER”) publishes fuel mix and carbon emission disclosures for suppliers (CER 2008). The last publication was electricity generated in 2007 and the results are summarised in Table 1.

	Renewable (%)	Non-renewable ¹ (%)	Total (kg CO ₂ /MWh)
Airtricity	79	21	142
Bord Gáis Energy (Supply)	16	84	512
ESB Customer Supply	9	91	625

1 - The non renewable fuels classifications are coal, gas, oil, peat and CHP.

Table 1 – Fuel mix and CO₂ emission disclosures, extracted from CER (2008).

Although no suppliers source all their electricity from renewable sources, the greenest supplier, by a long margin, is Airtricity. 79% of its electricity is generated from renewable sources with associated carbon emissions of 142 kg CO₂ / MWh.

The tariffs available from the suppliers are:

- Rural 24 hour
- Rural NightSaver
- Urban 24 hour
- Urban NightSaver

ESB networks determines whether the domestic premises are rural or urban. The customer can decide whether to go on a 24 hour or NightSaver tariff. The NightSaver tariff offers a much lower unit rate during the night time with the disadvantage of a slightly higher day rate and standing charge. In addition, a customer can choose to have a Night Storage heater which is attached to a separate meter. The Night Storage heater attracts a nominal standing charge and can be added to either the 24 hour or NightSaver tariffs.

Table 2 shows the prices ESB and Airtricity charge for these tariffs. These prices have been effective since 1st October 2009. Airtricity currently offers a discount on the ESB price and offers a variety of payment options with varying prices for each. The standing charges are the same for all suppliers.

	ESB Customer Supply	Airtricity Cheque	Airtricity Cheque with eBill	Airtricity Direct Debit	Airtricity Budget Plan and eBill	Bord Gáis Direct Debit Year 1	Bord Gáis Direct Debit Years 2 & 3
		Airtricity discount on current ESB kWh rate. This discount is guaranteed until 30 September 2010					
Discount on ESB price		5%	6%	12%	13%	10%	At least 5%
24 Hr Unit Rate	<i>Price in cents per kWh</i>						
General Units – 24 Hr	14.10	13.40	13.25	12.41	12.27	12.18	13.15
Night Storage Heating	7.45	7.08	7.00	6.56	6.48	6.44	6.95
Nightsaver Unit Rate	<i>Price in cents per kWh</i>						
Day Units	15.06	14.31	14.16	13.25	13.10	13.01	14.05
Night Units	7.45	7.08	7.00	6.56	6.48	6.44	6.95
Standing Charges	<i>Daily charge in cents</i>						
Rural 24 Hr			33.60				32.99
Rural Nightsaver			43.80				43.00
Urban 24 Hr			25.20				24.74
Urban Nightsaver			34.60				33.97
Night Storage Heater			2.20				2.16

Table 2– Residential Tariffs, ESB Customer Supply compared with Airtricity and Bord Gáis Energy

The PSO (Public Service Obligation) Levy was introduced to cover the additional costs of purchasing electricity from native sources and using environmentally friendly forms of fuel. The PSO Levy is currently set to zero Euro's for residential tariffs. The PSO Related Rebate refers to the sale proceeds of some of ESB's generating plant which are being used to reduce prices. The PSO related rebate is €1.91 per month of credit for the residential tariffs.

The average electricity usage per year, the yearly cost and CO2 emissions for the main types of dwellings are given in Table 3, Table 4, and Table 5. The yearly electricity usage for the various dwelling types is based on the typical heat demand and energy bills from 2004-2005, (Harcrow Group Ltd, 2007).

The electricity usage for a home largely depends on the type of central heating that is installed. If a home's central heating is powered by electricity then the electricity usage of that home will increase significantly. However if it is powered by gas or there is no central heating system then the electricity usage will decrease significantly.

The CO2 emissions in Table 3, Table 4, and Table 5 below were calculated using the total CO2 emissions in kg/MWh from Table 1.

Table 3 shows the yearly cost for electricity, excluding standing charges, and the yearly CO2 emissions for the different types of dwellings, when using ESB as the supplier. The price plan used to calculate the yearly cost is the 24 Hour tariff and is valid from 1st October 2009, (ESB Customer Supply, 2009).

Dwelling Type	Electricity Usage (kWh/Year) ¹	Cost (€)	CO2 Emissions (kg)
Flat	2,750	387.75	1,718.75
Terraced House	3,500	493.50	2,187.50
Semi-detached House	4,500	634.50	2,812.50
Detached House	5,500	775.50	3,437.50

1 – Average electricity usage for dwelling types, (Halcrow Group Ltd, 2007).

Table 3 – ESB Customer Supply average yearly cost and CO2 emissions for dwelling types

Table 4 shows the yearly cost for electricity, excluding standing charges, and the yearly CO2 emissions for the different types of dwellings, when using Airtricity as the supplier. The price plans used to calculate the yearly cost are the Airtricity 24 Hour Budget Plan With eBill (denoted Minimum Cost) and the 24 Hour Airtricity Cheque (denoted Maximum Cost), and are valid from 1st October 2009, (Airtricity, 2009).

Dwelling Type	Electricity Usage (kWh/Year) ¹	Minimum Cost (€)	Maximum Cost (€)	CO2 Emissions (kg)
Flat	2,750	337.43	368.50	390.50
Terraced House	3,500	429.45	469.00	497.00
Semi-detached House	4,500	552.15	603.00	639.00
Detached House	5,500	674.85	737.00	781.00

1 – Average electricity usage for dwelling types, (Halcrow Group Ltd, 2007).

Table 4 – Airtricity average yearly cost and CO2 emissions for dwelling types

Table 5 shows the yearly cost for electricity, excluding standing charges, and the yearly CO2 emissions for the various different types of dwellings, when using Bord Gáis Energy as the supplier. The price plan used to calculate the yearly cost is the 24 Hour tariff Direct Debit year 1, (denoted Minimum Cost) and 24 Hour tariff Direct Debit years 2 and 3 (denoted Maximum Cost). These prices are valid from 1st October 2009, (Bord Gáis Energy, 2009).

Dwelling Type	Electricity Usage (kWh/Year) ¹	Minimum Cost (€)	Maximum Cost (€)	CO2 Emissions (kg)
Flat	2,750	334.95	361.62	1,408.00
Terraced House	3,500	426.30	460.25	1,792.00
Semi-detached House	4,500	548.10	591.75	2,304.00
Detached House	5,500	669.90	723.25	2,816.00

1 – Average electricity usage for dwelling types, (Halcrow Group Ltd, 2007).

Table 5 – Bord Gáis Energy average yearly cost and CO2 emissions for dwelling types

Both ESB and Airtricity have the same yearly standing charges, whilst Bord Gáis Energy operates a slightly different tariff. The differences in yearly charges between the Rural 24 Hour tariffs from the three suppliers are detailed in Table 6. These are independent of the type of dwelling or the annual electricity consumption. The assumption is that most of the dwellings in the SERVE region would come under the “rural” heading.

Supplier	Annual “Rural 24 hours” standing charge (€)
ESB	122.64
Airtricity	122.64
Bord Gáis Energy	120.41

Table 6 – Annual standing charges from the three Electricity suppliers for Rural 24 Hours tariff

The actual difference in yearly standing charges between the three suppliers is quite small so has been neglected in the report when comparing the tariff from the three electricity suppliers.

3 Business Market

3.1 Suppliers and Green Tariffs

This section covers small to medium sized business customers e.g. commercial and industrial. It does not cover larger customers who are supplied at medium voltage ('MV') (10kV, 20kV or 38kV) or high voltage ('HV') (110kV) with a Maximum Import Capacity ('MIC') greater than 50kVA.

The following electricity suppliers are available:

- Airtricity
- Bord Gáis Energy
- ESB Customer Supply
- Energia
- ESB Independent Energy
- Vayu

Only Airtricity, Energia and ESB Independent Energy offer green tariffs. Unfortunately these suppliers do not publish information regarding the renewable to non-renewable fuel mix for these tariffs; neither do they publish the tariff prices.

3.2 ESB Customer Supply Tariffs

This section describes the available ESB Customer Supply tariffs and prices. This should allow easy comparison with the green tariffs and prices available from Airtricity, Energia and ESB Independent Energy.

Table 7 shows the tariffs available, Table 8 details the ESB electricity tariff for businesses with maximum import capacity less than 50kVA and Table 9 provides the ESB electricity tariff for businesses with maximum import capacity greater than or equal to 50kVA.

The PSO Levy is currently set to zero Euro's. The PSO related rebate is €5.98 of credit per month for MIC less than 30kVA and €0.96 of credit per kVA per month for MIC greater than or equal to 30kVA.

Tariff	Applicable To
Residential Business Premises	Businesses linked to residential premises. Only available to existing customers on this tariff.
Residential Business Premises NightSaver	Businesses linked to residential premises where more than 10% of the electricity is used at night. Only available to existing customers on this tariff.
General Purpose	For small commercial and industrial premises operating 9-5 with very little consumption at night and with a MIC less than 50 kVA.
General Purpose NightSaver	For small commercial and industrial premises using more than 10% of power at night and with a MIC less than 50 kVA.
General Purpose Quarter Hour	As for General Purpose except with a Quarterly Hour meter ('QH meter'). The meter is read remotely every 15 minutes and a monthly bill is produced based on actual consumption.
General Purpose NightSaver Quarter Hour	As for General NightSaver except with a Quarterly Hour meter ('QH meter'). The meter is read remotely every 15 minutes and a monthly bill is produced based on actual consumption.
Low Voltage Load Factor	For sports, commercial or industrial premises having a MIC greater than or equal to 50 kVA, a voltage supplied at LV (either 400V three phase or 240V single phase), and having a usage pattern that combines short periods of high demand with low overall consumption. For QH meters, these are read remotely every 15 minutes and a monthly bill is produced based on actual consumption. For non-Quarterly Hour meters ('NQH'), these must be read manually, and the bill is produced every two months based on actual readings.
Low Voltage Maximum Demand	For commercial or industrial premises having a MIC greater than or equal to 50 kVA, a voltage supplied at LV, and using high volumes of electricity. For QH meters, these are read remotely every 15 minutes and a monthly bill is produced based on actual consumption. For NQH meters, these must be read manually, and the bill is produced every two months based on actual readings.

Table 7 – ESB Customer Supply tariffs available to small and medium sized businesses

	Residential Business Premises	Residential Business Premises NightSaver	General Purpose	General Purpose NightSaver ⁵	General Purpose Quarter Hour Tariff	General Purpose Quarter Hour NightSaver
Unit Rate	<i>Price in cents per kWh</i>					
Day Units Block 1 ¹	14.10	15.06	15.27	16.49	15.27	16.49
Day Units Block 2 ²	15.27	16.49	14.44	15.97	14.44	15.97
Night Units	N/A	7.64	N/A	7.64	N/A	7.64
Night Storage ⁴	7.64	7.64	7.64	7.64	7.64	7.64
Reactive Power Charges	<i>Price in cents per kVARh</i>					
Wattless Unit Price ³	0.81	0.81	0.81	0.81	0.81	0.81
Standing Charges	<i>Daily charge in cents</i>					
Standing Charge	34.80	43.80	41.00	45.60	41.00	45.60
Standing Charge for Autoproducers ⁶	19.56	21.60	19.56	21.60	19.56	21.60
Night Storage Heating Standing Charge	2.20	2.20	2.20	2.20	2.20	2.20

1 - First 5110kWh consumed annually pro-rated daily for Residential Business tariffs and first 47,815 kWh consumed annually for General Purpose tariffs

2 - Remaining kWh in excess of Block 1

3 - The Wattless Unit Price is the price charged for reactive power consumption. It applies to all wattless units (kVARh) in excess of one third of total day and night units (kWh) per bill.

4 - The Night Storage rate applies between 23:00 and 08:00 (winter) and 00:00 to 09:00 (summer)

5 - The Night Load rate applies between 23:00 and 08:00 (winter) and 00:00 to 09:00 (summer)

6 - An Autoproducer is a net energy exporter, where their Maximum Export Capacity ('MEC') is greater than their Maximum Import Capacity ('MIC')

Table 8 – ESB Customer Supply tariff prices available to businesses with a MIC less than 50kVA

	Low Voltage Low Load Factor	Low Voltage Maximum Demand
Unit Rate	Price in cents per kWh	
Winter Day Units	16.43	14.35
Winter Night Units ¹	6.73	6.73
Summer Day Units	12.54	12.54
Summer Night Units ¹	6.73	6.73
Maximum Demand Charges⁵	Price in cents per kW per day of max demand	
Demand Price (Summer) ⁴	N/A	0.00
Demand Price (Winter) ⁴	N/A	9.40
	Price in cents per kVA	
Excess capacity (NQH meter) ³	1340.00	1340.00
Excess capacity (QH meter) ³	1117.00	1117.00
Reactive Power Charges	Price in cents per kVARh	
Wattless Unit Price ²	0.74	0.74
Standing Charges	Daily charge in cents	
Standing Charge	302.00	302.00
Standing Charge for Autoproducers	95.90	95.90
Capacity Charge (MIC), per kVA per annum	7.34	7.34
Capacity Charge for Autoproducers where MIC >= 526KVA, per kVA per annum	2.63	2.63
Capacity Charge for Autoproducers where MIC < 526 kVA , per kVA per annum	0.47	0.47

1 – Night hours for non-quarterly hour meters are from 23:00 – 08:00 (winter) and 00:00 – 09:00 (summer). For quarterly hour meters night hours are 23:00 – 08:00 all year

2 – Applies to all wattless units (kVARh) in excess of one third of the total Day and Night Units (kWh) per bill

3 – The excess capacity charge applies when the MIC is exceeded

4 – Summer is March to October, Winter is November to February

5 – The Demand Price is subject to a minimum demand of 30kW

Table 9 – ESB Customer Supply tariff prices available to businesses with a MIC greater than or equal to 50kVA

4 Conclusions

At the time this report has been written, in October 2009, there is only one green electricity supplier for residential customers: Airtricity. Bord Gáis Energy is the cheapest of the three suppliers; however it is only slightly cheaper than Airtricity and only in year 1, and has significantly higher CO2 emissions.

The average electricity usage for typical dwelling types (flats, terraced houses, semi-detached houses and detached houses) varies, with flats having the lowest usage and detached houses the greatest. This results in the yearly cost of electricity and the CO2 emissions following the same trend.

For business customers, there are three suppliers which offer green tariffs: Airtricity, Energia and ESB Independent Energy. It is recommended that SERVE obtain quotations from these suppliers and enquire as to the actual greenness of the tariffs. To be able to compare the greenness of the tariffs the supplier should be asked for the renewable/non-renewable fuel mix ratio and the carbon emissions associated with each MWh of generation. Prices can then be compared with the ESB Customer Supply prices re-produced in this report.