VERISAE

THE CARBON REDUCTION COMMITMENT

Are You Ready, Willing and Able?

From Verisae, Inc. | November 2009

INTRODUCTION

This white paper offers an explanation of the challenges and opportunities inherent to the Carbon Reduction Commitment (CRC) legislation. First, we will explain the CRC carbon reporting regulation in some depth. Second, we will then communicate this information in the context of a hypothetical company ABC plc.

As will be seen from the scenarios presented, organisations must keep accurate records, be proactive in compliance mitigation, and set definitive timelines for initiatives to address CRC reporting. Any organisation affected by the CRC would do well to seek assistance to help it understand its reporting requirements and to follow through with its obligations.

■ CARBON REDUCTION COMMITMENT (CRC)

Is your firm ready, willing and able to respond to the carbon emissions management and reporting requirements?

A modern Greenhouse in RHS Wisley

The UK Climate Change Act 2008 tasks the government with developing regulations for mandatory Greenhouse Gas reporting by 2012, including the publishing of guidance by October 2009. These guidelines have now been published by DEFRA and have been developed with input from a number of interested bodies including the CBI and the international Climate Disclosure Standards Board.

The CRC is mandatory UK cap and trade scheme, enabled by the provisions of the Climate Change Act, and targeted at the non energy intensive sector of the UK economy. It starts in April 2010 and has a range of compliance and reporting requirements, in addition to financial and reputation impacts for participants.

CRC REPORTING FAILURES HAVE REPERCUSSIONS

There are serious repercussions should an organisation falter during any one of the stages of the CRC. It is important that considerable attention be given to each stage of the operation, starting from the initial assessment of the organisation's baseline, through compliance in allowance surrender, measuring and reporting, and finally with adequate financial preparation.

Each company should understand that it must not only prepare for an ideal scenario in terms of direct financial payments and receipts, but must also allow for its "rainy day" scenario where it is unable to meet the goals set forth during initial baseline calculations. Suffering from additional financial burdens because of poor data quality and inaccurate carbon emissions estimates could have devastating consequences for an organisation.

Over and above the direct costs of participating, the organisation must allow for the administrative expenses associated with each stage of the program, together with any consultation fees, and strive for solutions providing attractive returns on investment (ROI).

Addressing the CRC reporting requirements need not be financially draining. Many opportunities exist to increase organisational efficiencies and reduce energy consumption, whilst reducing costs and thereby have the initiatives "pay for themselves".

CRC BACKGROUND

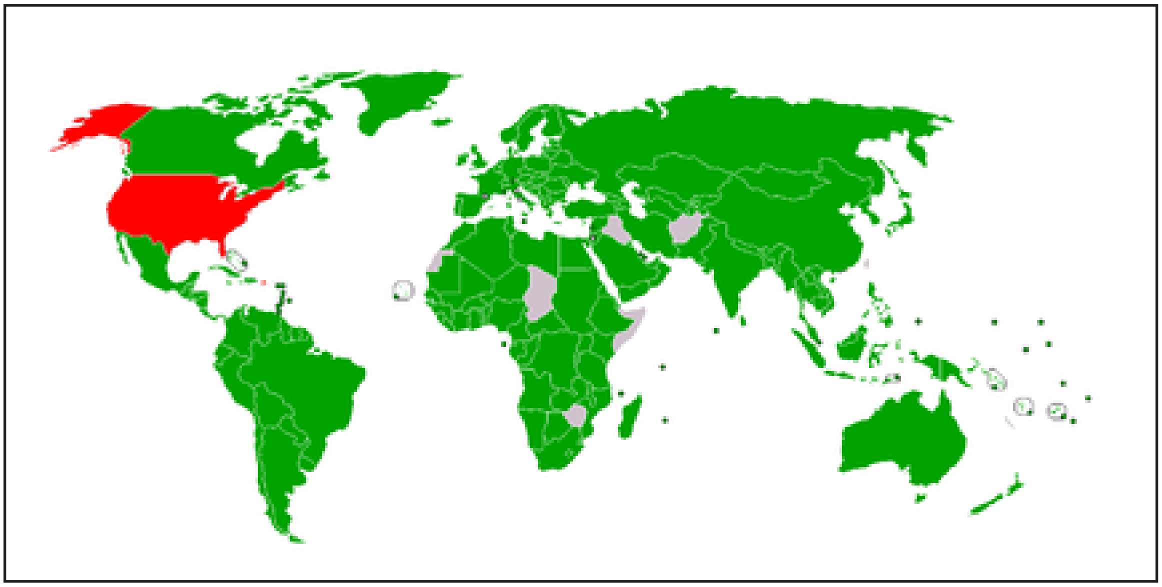
The CRC will commence in April 2010. It is one of the first and farthest reaching mandates covering greenhouse gas (GHGs) emissions and requires energy monitoring and carbon reporting. The emission trading scheme proposed by the UK government is based on the conventional "cap and trade" model and is designed to aggressively curtail the amount of greenhouse gases released to the atmosphere year-over-year, on an ongoing basis.

The CRC legislation sets a benchmark for the UK government. Most governments worldwide are considering how they can make meaningful emissions reductions via local regulatory controls or via the far-reaching objectives set by the Kyoto Protocol.

The CRC is designed to ensure that organisations which are major consumers of energy and major emitters of carbon must actively participate, report, and engage in reduction efforts.

Once an organisation has identified that it must comply, it must take steps to carefully monitor all its energy use and compile yearly carbon emissions reports. Failure to do so will result in poor placement within the league table, with resultant penalties, and even potential fines.

Essentially, organisations will be required to buy allowances at the start of each year (or acquire them through trading in the secondary market) for each anticipated tonne of CO_2 equivalent



Participation in the Kyoto Protocol, only where dark green is indicated the countries that have signed and ratified the treaty, yellow is signed, but not yet ratified, grey is not yet decided and red is no intention of ratifying. The only country that has no intention of ratifying the Kyoto Protocol is the United States of America.

(tCO_2e) emissions, and then surrender those allowances to match actual emissions following year end. Money raised from the sale of allowances will be recycled back to participants, adjusted for bonuses and penalties dependant on an organisation's performance in the league table published in October each year.

ORGANISATIONS AFFECTED BY THE CRC

The CRC is groundbreaking in many respects, for example its focus on the non energy intensive sector of the UK economy, its broad coverage of public and private sector organizations, and its use of a published league table to add a reputation incentive to performance. There are also far reaching civil and criminal enforcement mechanisms available to the government regulators to ensure compliance. During 2009 and early 2010 organisations should be actively involved in assessing compliance requirements and determining possible courses of action.

> All across the world, in every kind of environment and region known to man, increasingly dangerous weather patterns and devastating storms are abruptly putting an end to the long-running debate over whether or not climate change is real. Not only is it real, it's here, and its effects are giving rise to a frighteningly new global phenomenon: the man-made natural disaster.
>
> —Barack Obama

Principally, any organisation that has at least one half hourly meter settled on the half hourly market, and had electricity consumption above 6000 MWh from half hourly meters in the 2008 calendar year (equating to approximately £500,000 in annual energy bills), will be a full participant in the scheme.

At this threshold, it is anticipated that approximately 5,000 organisations will be included as full participants in the scheme, whilst a further 15,000 will fall below the threshold but will still need to make an Information Disclosure at the start of each phase. Power companies and heavy industrial emitters are covered by existing schemes such as the EU ETS and Climate Change Agreements, and whilst those regulated emissions will be excluded from the CRC to avoid double counting, elements of those broader organisations may well be included in the CRC scheme covering emissions outside of the EUETS and CCA's schemes.

Certain core source of electricity and gas consumption must be reported under the CRC, but further smaller sources and fuel usage can be excluded provided at least 90% of an organization footprint is covered across the sum of CRC, EUETS and CCA covered emissions.

THE IMPLICATIONS OF THE CRC

The implications and challenges faced by organisations in relation to the CRC are extensive. Organisations must understand that they may face obstacles and challenges, but also opportunities within the following regulatory and non-regulatory areas:

- Financial penalties for failure to register or not fully registering all meters
- Financial penalties for failure to provide footprint reports and annual reports by the stipulated deadlines
- Financial penalties for incorrect reporting of emissions and other information
- Financial penalties for failure to surrender allowances and failure to keep adequate records
- Financial repercussions of poor league table performance, due to reduced recycling payments being received
- Potential for cost savings due to reduction in energy use
- Potential damage or benefit flowing from the reputation impact of published league table ranking, with the financial impacts that flow from that in terms of impacts on turnover and profit margins
- Potential opportunities to gain a competitive advantage
- Potential opportunities to influence policy making
- Potential to be seen as a sustainability leader, rather than just being scheme compliant
- Potential beneficial effects on staff morale.

As can be seen, the CRC and its associated implications have a significant bearing across the entire organisation. However, it can also be seen that in addition to posing a threat to the business the CRC legislation can also provide opportunities to enhance a business's position, to provide a more streamlined operation, and to gain significant tangible and intangible advantages over the competition.

FUNDAMENTAL BUSINESS CONSIDERATIONS FOR CRC REPORTING

It is recommended that organisations impacted by the CRC should immediately engage in proactive preparation. A compliance checklist should be prepared to ensure that the entity will be ready to meet all the requirements and deadlines necessary with special focus on the data management, tracking, and reporting infrastructure necessary to effectively manage compliance risk.

There are three fundamental considerations to understand. You must correctly define your organisational boundaries related to CRC emissions reporting. You must be able to define your material emissions within a 5% margin of error across all UK facilities. You must also ensure that you have an adequate means of measuring and monitoring organisational data, reporting accurately initial baselines with updated yearly reports, and meeting all the reporting deadlines and other compliance requirements.

DEFINING ORGANISATIONAL BOUNDARIES

When it comes to organisational definition, this may be relatively straightforward for many companies. However, you may be part of a foreign owned organisation and have multiple sites across Europe. You must be select one of the domestic UK legal entities to act as the nominated lead subsidiary for compliance, in relation to all the company's UK subsidiaries and operations.

If a significant large subsidiary (termed a Significant Group Undertaking) in itself consumes more than the 6000 MWh of half hourly electricity during 2008, it may enter into the CRC as a separate participant, distinct from the rest of the parent organisation. This may be of particular significance to the parent organisation as it may be able to avoid adverse affects to its reputation, should the subsidiary fail to perform adequately.

> A global climate treaty must be implemented even if there is no scientific evidence to back the greenhouse effect.

HAVING ADEQUATE BUSINESS CASH FLOW

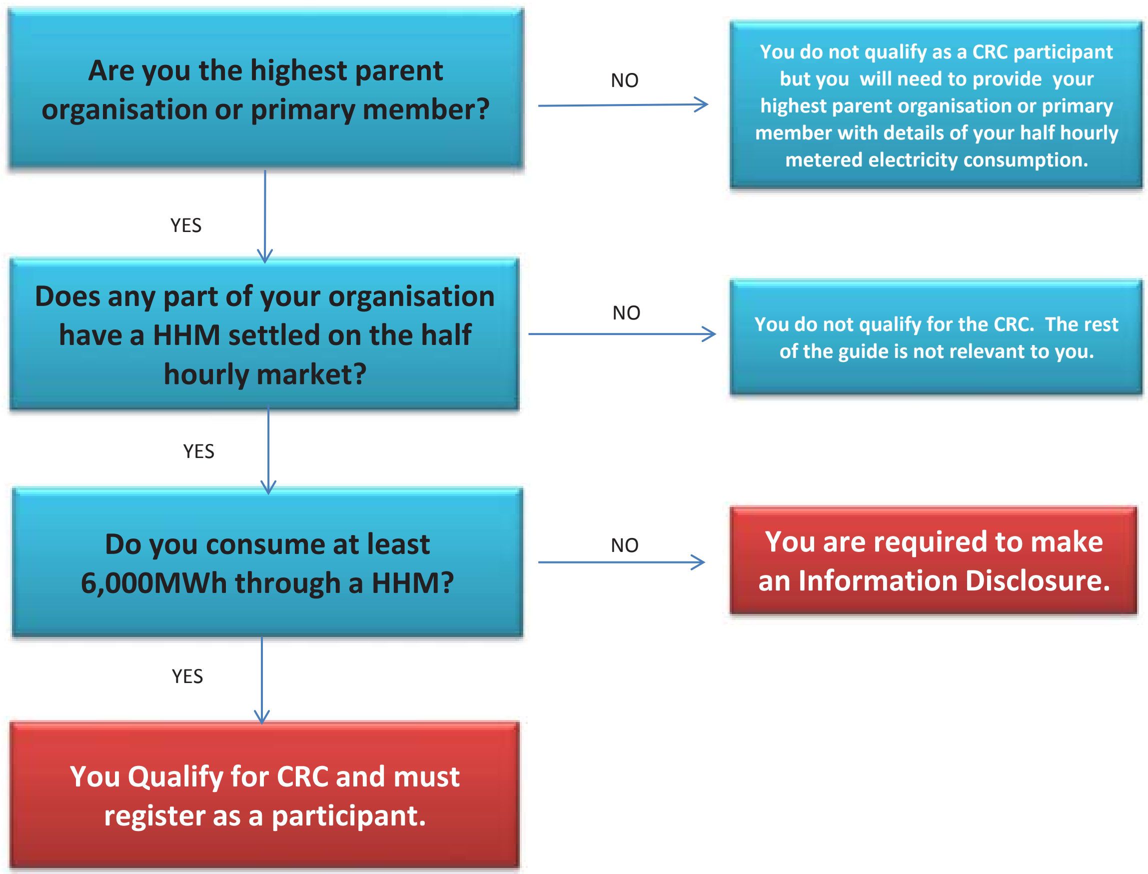
As participation involves economic outlay and receipts, there are considerable cash flow repercussions to consider. You must ensure that you have adequate cash flow provisions to meet both the allowance purchase requirements as well as to cover any net shortfalls caused by underperformance and/or any anticipated administrative fines.

The UK government has made it clear that it will produce a Performance League Table detailing each organisation's performance against each of the metrics, as well as overall performance. Depending on actual performance there can be considerable implications from reputation and financial perspectives.

As such, many departments across your organisation should be fully prepared to deal with eventualities and various alternative scenarios of CRC participation. Organisations that utilize space for which they are not the legal counterparty to the energy supply contract (and hence are not responsible from a CRC reporting perspective) should anticipate CRC related costs being passed on to them by landlords. Similarly, organizations that rent space to other organisations or operate the outsourced operations of others, should consider modifications to lease agreements and service contracts to allow recovery of the cash flow implications and potential net cost and benefit implications of CRC participation.

REQUIREMENTS, CALCULATION, AND CRC PROGRAM REGISTRATION

There are very detailed requirements outlining the procedure for calculating and determining an organisation's relevant carbon footprint baseline. The regulations require that 90% of your total organisational carbon footprint emissions must be covered through the combination of CRC, EUETS and Climate



Change Agreement (CCA) emission coverage. If your organisation has emissions covered by the EU ETS or CCA, then those emissions are not covered by the CRC requirements in order to avoid double counting. The organisation must make its declaration to the government during the registration period beginning in April and running through to September 2010.

To evaluate your organisation's involvement, you should immediately collate all half hourly meter data for calendar year 2008. Utility providers are mandated by the government to assist you to collect this information if needed. These readings must be taken from mandatory half-hour, voluntary, remote and pseudo-half hourly meters.

The threshold for full participation is 6,000 MWh of electricity consumption in the 2008 calendar year. Below this consumption level, simple Information Disclosure at the start of each phase is required. At or above this threshold full participation is required with the reporting of emissions baselines, yearly reporting and annual allowance surrender.

THE CRC INTRODUCTORY PHASE

The first year of the scheme (1 April 2010 to 31 March 2011) is a reporting year only, with no allowance purchases required. During the following two years of the introductory phase of the scheme, allowances will be sold at the start of each compliance year at a fixed price of £12 per tonne of CO_2. An uncapped number of allowances will be available in the introductory phase.

Any emissions baselines and required allowances should be calculated with a very high level of accuracy as these will have a significant effect on cash flow. Whilst allowances can be banked and used for future years, it must be noted that no banking is allowed from the end of the uncapped introductory phase into the capped phases of the scheme commencing in 2013.

THE SUBSEQUENT CRC REPORTING PHASES

Following the end of the first phase, the program will adopt an auction-based trading mechanism using sealed bids and capping the number of allowances available. This increasingly stringent cap in the CRC scheme, helping the UK government meet its overall emission reduction targets, would put upward pressure on the price per tonne of CO_2. Increasing prices will increase the financial burden of allowance purchase and increase financial impact of league table performance, leading to a greater incentive for organisations to reduce emissions and improve their performance over time.

The government has said that 100% of the funds received from the sale of carbon allowances will be recycled back to scheme participants. The amount received in recycling payments is calculated with reference to the organisation's share of base year ('10/'11) scheme emissions, adjusted by a bonus or penalty based on league table performance in the relevant year. The extent of bonus/penalty will grow from a maximum of 10% in the first league table published in 2011, to 50% by year 5 and potentially higher thereafter.

It is therefore possible for an organisation to make net gains from the scheme if performing in the top half of the tables, effectively subsidised by those poor performers in the bottom half of the league table. These potential financial implications should be considered within broader business cases that the organisation may develop to assess the viability of implementing green initiatives. The reputation impacts and indirect financial implications of CRC league table ranking versus competitors should also be assessed.

Recycling bonuses and penalties for the first year of the scheme will be based solely upon the organisation's performance under the "Early Action" metrics which relate to the extent to which automated meter reading (AMR) has been installed on a voluntary basis and the extent to which the organisation has achieved the Carbon Trust Standard (or equivalent) certification.

The Early Action metric weighting reduces in the second and third year of the scheme, and it is then dropped altogether at the end of the introductory phase at which point only the Absolute and Growth metrics will remain. The Absolute metric considers change in absolute emissions, whereas the Growth metric considers emissions per tonne of CO2 and hence recognises the impact of business growth or decline. Significantly more weighting it placed on the Absolute metric, with it having three times the weighting of the Growth metric when assessing overall league table performance.

THE HYPOTHETICAL EXAMPLE OF COMPANY ABC PLC

Let's take a look at a hypothetical organisation, ABC plc, a provider of products and services in the UK. ABC plc has received notification from the government to confirm that it must participate in the CRC.

We will identify what might happen in two scenarios—A and B, with the first scenario relating to good compliance with CRC reporting requirements and good emission reduction performance. The second scenario will highlight the effects when an organisation under performs and is not fully compliant.

Scenario A

ABC registered for participation in the CRC in April 2010.
ABC sent in its footprint report in July 2011.
ABC sent in its annual report in July 2011, reporting emission of 200,000 tCO2e for the base year '10/'11

ABC put in place measures to reduce its emissions and hence number of allocations required by 5% per year. It buys allowances as follows:

Year one, April 2010 – no allowance purchase as '10/'11 a reporting period only
Year two, April 2011 to March 2012 – £2,280, 000 (190,000 tCO2 x £12 per tCO2)
Year three, April 2012 to March 2013 – £2,166,000. (180,500 tCO2 x £12 per tCO2)

As a consequence of its efficiency and top performance in the Early Action metric, ABC is assumed to be at the very top of the league table published by the government at the end of each year.

October 2011, ABC is paid a bonus, based on its performance, of 10% = £228,000 (the revenue collected in April 2011 for the '11/'12 year is recycled back in October 2011 based on the company's '10/'11 performance).

October 2012, assuming it is again at the top if the league table following its performance under all 3 metrics, ABC is paid a bonus of 20%, which would equate to over £433,000. The exact payment is not 20% of £2,166,000 as the recycling is calculated with reference to the organisation's share of base year ('10/'11) emissions, adjusted for the bonus percentage which results in a yield in excess of 20% of April 2012 allowance purchase in this case. This is due to the company contributing a smaller percentage of overall scheme revenues in the April 2012 allowance sale than its share of emissions were in the base '10/'11 year.

October 2013, assuming top league table performance again in the reported '12/'13 year, the company would received a bonus of 30% calculated with reference to its '10/'11 share of scheme revenues and applied to the revenue amassed in the April 2013 allowance sale. The size of the April 2013 allowance would be impacted by the level of capping introduced at that date (the start of the capped phase II) and the auction price per allowance set through the sealed bid, uniform price auction mechanism applied at that point.

Scenario B

ABC was late registering for participation in the CRC and did not register until October 14, 2010—it was subsequently fined £10,000 including a flat fine of £5,000 and £500 for each of the 10 working days that the registration was late.

ABC failed to send in its footprint report on time, being 20 working days late and was fined a total of £15,000 consisting of an initial £5,000 penalty + £500 per working day.

ABC failed to send in its annual report on time, being 20 working days late and was fined a total of £15,000 consisting of an initial £5,000 penalty + £500 per working day.

ABC is found to have incorrectly reported its emissions for the base year, instead of reporting 200,000 tCO_2e, it reported only 180,000 tCO_2. As a result, ABC was fined £400,000, based on a penalty of £40 per tCO_2 of variation in excess of 5% (190,000 less 180,000 x £40 per tCO_2e).

ABC also did not surrender sufficient allowances in July 2012, surrendering 5,000 fewer allowances than were required by the deadline. The penalty incurred for this was £200,000 based on £40 per allowance not surrendered. In addition, ABC had to subsequently purchase and surrender the shortfall in allowances.

In addition to the financial penalties above, the lack of compliance above was publicly communicated by the scheme administrator, harming ABC reputation in the market. ABC was also not able to achieve efficiencies throughout the first three years of the scheme, with its emissions staying flat

It buys allowances as follows:

- Year one, April 2010 – no allowance purchase as '10/'11 a reporting period only
- Year two, April 2011 to March 2012 – £2,400, 000 (200,000 tCO_2 x £12 per tCO_2)
- Year three, April 2012 to March 2013 – £2,400,000. (200,000 tCO_2 x £12 per tCO_2)

As a consequence of its inefficiency and complete lack of Early Action performance, it is at the bottom of the league table published by the government at the end of each year.

October 2011, it receives a recycling payment after a 10% penalty is applied, resulting in a net £240,000 loss on recycling.

October 2012, assuming it is again at the bottom if the league table following its performance under all 3 metrics, it incurs a penalty on recycling of 20%. This would equate to a loss of more than £480,000 on recycling as the recycling payment is calculated with reference to the base year ('10/'11) emissions, at a time when ABC made up a smaller proportion of scheme emissions. Stated differently, ABC contributed a greater portion of revenue in the 2012 allowance sale than the proportion used in the starting point of the recycling calculation.

October 2013, assuming bottom league table performance again in the reported '12/'13 year, the company would incur a penalty of 30% calculated with reference to its '10/'11 share of scheme revenues and applied to the revenue amassed in the April 2013 allowance sale. The size of the April 2013 allowance would be impacted by the level of capping introduced at that date (the start of the capped phase II) and the auction price per allowance set through the sealed bid, uniform price auction mechanism applied at that point.

Thus we can see that the difference between scenarios A and B is very significant.

The inefficient and non compliant ABC under scenario B received fines of £640,000, it also incurred penalties of over £720,000 in the 2011 and 2012 recycling payments due to poor league table performance. In total, excluding the further impact of poor performance in the 2013 recycling payment, ABC plc incurred total fines and penalties of over £1,36m in the first 2 years of the scheme.

In contrast, over the same period, the compliant and top performing ABC plc under scenario A incurred no fines and received bonuses of over £660,000, and also had the benefit of lower energy costs and reduced funding requirement as fewer allowances needed to be bought and held.

In summary therefore, the difference between the two scenarios is over £2m, a significant sum of money for any organisation.

SUMMARY

The financial impact of the scheme on a participating organisation will increase over time due to the increase in maximum bonus/penalty percentages each year as well as likely increase in allowances prices when the scheme moves into the capped phases from 2013 and prices are determined by auction. Reputation impacts can already be significant from 2011 though, when the first league table is published.

As can be seen from the scenarios above, accurate energy and emission reporting and forecasting is essential to ensure compliance as well as to optimise financial and reputation impacts under the scheme. Any organisation affected by the CRC would do well to seek assistance to help it understand its reporting requirements and put the appropriate management system in place.

ABOUT VERISAE

Verisae **(www.Verisae.com)** develops, markets, and licenses **Sustainability Resource Planning (SRP) ™,** an enterprise solution that empowers organizations to make "sustainability actionable". Verisae helps measure, manage and monetize energy costs and carbon emissions. SRP covers the core functions of sustainability needs by combining multiple business processes and systems into one database to use across the enterprise. Our platform improve operational efficiency, make sustainability initiatives actionable, and reduce energy costs carbon emissions for distributed enterprises and energy companies.

ENVIRONMENTAL MANAGEMENT

Carbon Emissions Manager
- Scope 1 & 2 Emissions
- Scope 3 Emissions

Sustainability Project Manager

Water Manager

Waste Manager

ENERGY MANAGEMENT

Energy Supply Manager
- Utility Bill Processing
- Active Energy Response
- Utility Contracts Management
- Energy Spend Manager

Energy Demand Manager
- Real-Time Energy Management
- Active EE Dispatch
- Energy Efficiency Projects

ASSET MANAGEMENT

Service Manager
- Service Provider Management
- Financial Management

Asset Manager
- Facilities Management
- Equipment Management
- Asset Monitoring & Alarming
- Parts & Inventory Management

Procurement Manager
- Rebates & Incentives Management
- Total Capital Planning
- Equipment Procurement

Given the heightened priority of corporate sustainability, Verisae is positioned right now to enable organizations to establish a carbon footprint baseline, outline energy management options, and provide a comprehensive corporate sustainability action plans in a manner of months. All of which can be implemented with metrics in place to highlight bottom-line cost savings and return on investment timelines.

Today, Verisae delivers a broad range of sustainability solutions to over **40 global clients** with a service network of **7,500 third party service providers** consisting of **60,000 application users.** Our integrated sustainability platform actively tracks over **2,100,000 million assets** across **20,000 sites.** We help measure, manage and monetize energy costs and carbon emissions. We are uniquely position to help organizations prove return on investment (ROI) for sustainability initiatives.

VERISAE WORLDWIDE HEADQUARTERS

100 North First Street, Suite 701A
Minneapolis, MN 55403 USA

MAIN
612 455 2300

WEB
www.verisae.com

EMAIL
sales@verisae.com