

Greenhouse Gas and Energy Management



CAPABILITY STATEMENT



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CAPABILITY STATEMENT

GHG and Energy Management Services

Introduction

VRT Systems has provided services to government, commerce, industry and the resources sector, in the areas of 'Energy Management' and 'Greenhouse Gas' reporting for 20 years.

The NGER Act

In September 2007, the Commonwealth Government passed the National Greenhouse and Energy Reporting Act (NGERA). The purpose of the new law is to ensure that there is a consistent approach to greenhouse gas emission reporting across Australia. The collection and reporting of information related to greenhouse gas emissions, greenhouse gas projects, energy production and energy consumption is a precursor to establishing the Australian Emissions Trading Scheme (AETS). Compliance obligations under the new law begin in July 2008 with the first report due in October 2009.

VRT Systems has developed a dedicated team of specialists to understand NGER and its draft regulations. The National Greenhouse and Energy Reporting Act (NGER) is the world's first mandatory energy/carbon reporting scheme and businesses are now faced with the challenge of implementing and complying with this legislation.

In a recent article BRW magazine recommended that all companies should adopt the following essential actions:

- 01 Check their obligations under the National Greenhouse and Energy Reporting Act 2007
- 02 Start collecting data on direct emissions whether or not the business is affected by NGER
- 03 Determine their emissions intensity: how many tones of greenhouse gas does the company emit per million dollars of revenue.
- 04 Calculate if it is cheaper to reduce emissions or buy permits
- 05 Consider outsourcing some of the permit trading functions.

VRT can assist companies to complete these essential steps by:

Understanding NGER and its draft regulations.

Understanding what data needs to be collected across a complex organizational business structure.

Help companies to gather, define and report energy/emission sources.

Defining boundaries and operational control of sites/facilities.

Minimising the cost of compliance and data collection.

Embedding automated data collection systems into business practices.

Developing/maintaining staff skills, systems and tools.

Managing compliance risk – sources, materiality, accuracy, transparency, records.

Assist in Greenhouse Gas inventory reporting under the NGER Act.

Other Government and Industry Initiatives

VRT can also help with other greenhouse & energy reduction initiatives at Federal, State and company levels e.g. EEO, Green Star, EEGO, NABERS and the Queensland Governments "Smart Energy Savings Program"

The question many organisations are now asking themselves is “What can sustainability initiatives do for my business?”

VRT can help to deliver the answers: *Measure, Manage, Minimise*

1 Carbon Strategy and Plans

To enable the development of understanding within an organisation VRT has developed presentations that explain the legislation and regulations and the implications of these on client operations,

Strategies may include:

- One-on-one time with site representatives to establish data sources and assess where operational control boundaries can be determined, and where doubt exists;
- Workshops to determine challenges experienced in the collection and retention of complete and accurate data sets and ways in which these might be resolved.
- Written materials for internal circulation to assist ongoing understanding of NGER requirements.
- Calculate if it is cheaper to reduce emissions or buy permits

2 Greenhouse Gas (GHG) Audits for Carbon Footprint Identification

Initially VRT will complete a GAP analysis to determine the additional effort required to complete audits and prepare data for NGER reporting.

Outcomes may include:

- A complete company audit of greenhouse gas emissions. VRT has developed protocols and templates to simplify the collection process and minimise errors in data collection/collation.
- Determination of additional emission sources for which data should be collected.
- Identification of the type of data that should be collected to support the calculation of emissions in accordance with NGER regulations.

3 Carbon Monitoring and Reporting

VRT will ensure that data collected is complete, accurate and formatted ready for submission to the Online System for Comprehensive Activity Reporting (OSCAR); as per the requirements set out under NGER.

As Systems integrators for over 20 years, VRT is an expert at implementing software and metering solutions to provide a complete energy management solution for your facility or operations plant. It can prepare automated, scalable software and hardware platforms to support variable numbers of meters and remote devices for data collection. Future data collection for greenhouse gas reporting can then be monitored and reported accurately from one central location.

VRT is a certified Energy Systems Integrator (ESI) for Schneider Electric and can supply a integrated energy monitoring system for WAGES (Water, Air, Gas, Electricity and Steam) at your facility. VRT is also a distributor for the SATEC range of electrical analysers and meters.

Metering

The guiding principle for determining the level of data required is that the data should enable meaningful analysis of energy use of major systems and items of equipment, calculation of energy efficiency indicators by activity when combined with other relevant data (e.g. production rates, transport task data), and accurate identification, evaluation and tracking of energy efficiency opportunities over time. Participants should expect to spend up to 1.5% of the annual cost of the energy being monitored on metering and monitoring. For example, if a piece of equipment uses \$100,000 of energy each year, up to \$1,500 per annum should be allocated for gathering detailed data (including capital cost for metering and ongoing costs such as calibration).

Projecting energy savings

Estimation of potential energy savings can be done using different methods. For example:

- if a change has previously been made at another similar site, the savings may have been metered and documented;
- engineering calculations or modelling of the savings may be carried out based on metered data;
- a trial or pilot may be implemented, metered and measured; or
- information may be provided by equipment suppliers and designers (this information should be validated).

Extract from EE0 Guidelines

4 Emission Reduction

VRT can provide advice to businesses in commerce, industry and mining to help them manage their energy more efficiently, reduce costs and effectively manage associated risks. Via long standing partnerships with relevant products and services suppliers, VRT can also implement energy management systems and processes.

Our experience at VRT has shown that many of the energy/emissions reduction projects have payback periods of 1 to 2 years.

Your Next Step ...

Don't delay your preparation for mandatory carbon emission reporting to NGER - Contact **VRT** today.

VRT Systems Greenhouse Gas Emissions assessments are written in compliance with [The GHG Protocol Corporate Accounting and Reporting Standards](#).

Testimonials

Xstrata PLC in Australia has been involved from the beginning of the Energy Efficiency Opportunities program (EEO) and sees the energy efficiency pathway as the most cost effective way and perhaps the only way to achieve any early gains in greenhouse gas reductions. Involvement in EEO has highlighted the low quality of data and information available about plant energy demand and consumption and particularly our ability to meet one of the requirements of the EEO process which is an energy mass balance.

In total, over the 18 month period of the installation of the energy management system, the interval meters and the required communications channels, Xstrata expended approximately \$500K. In the first year, accurate measurement of the various site power demands and energy consumption has helped justify several projects, the first two of which have resulted in annual savings of approx \$300k in energy consumption alone. The accumulated benefits over the coming years will far outweigh the cost of the system.

Quote – Greg Will, Energy Management Superintendent - Xstrata Copper. 14 December 2007

The Regional Utilities Management System (RUMS)

The RUMS is a state of the art metering and monitoring system that provides real time submetering capability at Gallipoli Barrack. It provides accurate and comprehensive electricity consumption data for all units located within the Barracks. The RUMS is allowing Defence to implement an ongoing Energy Management strategy within South Queensland, which will help us to improve energy efficiency and reduce greenhouse gas emissions.

The RUMS also has the capability to control electrical plant and equipment, once the necessary hardware is installed. This capability is programmable and flexible and will only be implemented were it can be effective and always after consultation and agreement with users. All equipment which may be switched off by RUMS, will be provided with manual override switches which will enable occupants of any affected area to override RUMS and switch such equipment back on.

Through RUMS a number of projects have already been identified. For example, electricity consumption at 2HSB has been reduced by around 30% by initiatives that introduced improved water heating technology.

Kevin Bridge, Regional Energy and Sustainability Manager - Australian Department of Defence.
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