Chapter 33
Using Carbons Emissions Management Solutions in Practice

Vu Long Tran
Springboard Research, Australia

ABSTRACT

Carbon emissions and their impact on the overall climate are increasingly becoming a major issue and topic of discussion for individuals, organisations and Governments all over the world. Attempts are underway to bring about sustainable practices at all these levels. Information Technology (IT) can be viewed as major contributor of carbon emissions due to the large power requirements for running IT. While may be the case, IT can also be a means to facilitate the mitigation and reduction of carbon emissions by enabling organisations. These IT tools typically come in the form of Carbon Emission Management solutions (CEMS), custom-built spreadsheets, along with other customised varieties. Each can be implemented to support and address some of these challenges although they each pose challenges of their own. They are available that facilitate improved positioning and visibility for the organisations and to provide desired functionality, including:*Record, measure, monitor and forecast carbon emissions within the organisation, *Report and comply with the growing number of legislative requirements, *Participate in carbon trading more efficiency and effectively. These CEMS tools can allow organisations to have greater awareness and be able to increase the efficiency and effectiveness of their current processes and procedures and meet carbon emission challenges. This chapter discusses the practical aspects of the use of such CEMS tools. This chapter first outlines the three categories of CEMS tools, followed by a comparative analysis of the various advantages and limitations of each of these tools. Finally, this chapter outlines the ways in which the CEMS software can be used in organisations. Challenges related to configuring and implementing the software is discussed from a practical viewpoint.

INTRODUCTION

Carbon emissions and their impact on the overall climate is increasingly becoming a major issue and topic of discussion for individuals, organisations and Governments all over the world. Attempts are underway to bring about sustainable practices at all these levels. For business organisations, in particular, this brings about specific challenges in terms of understanding and complying with standards and regulations that are not only complex but are also continuously changing as new understandings and agreements come into place (e.g. the Copenhagen summit, Dec 2009).

Information Technology (IT) can be viewed as major contributor of carbon emissions due to the large power requirements for running IT such as IT equipment, including the data servers which also require specific buildings that need to be kept cool. Whilst this may be the case at times, i.e. running IT does add to carbon emissions, the savings made in relation to IT generally aren't always as significant as the gains that can be made when IT is used to enable carbon emissions management and reduction initiatives within other areas of a business or industries. Particularly when IT is used at various points of business processes, procedures, and/or as a tool in a way that it will allow organisations to be better positioned to understand and manage their carbon emissions. (Foster 2009)

There are various processes, procedures and tools that do facilitate this improved positioning and visibility for the organisations and these include Carbon Emission Management solutions (CEMS), custom-built spreadsheets, along with other customised varieties. Each can be implemented to support and address some of these challenges although they do each pose challenges of their own.

Whilst they do face challenges, they can provide the ability to undertake the following:

- Record, measure, monitor and forecast carbon emissions within the organisation
- Report and comply with the growing number of legislative requirements
- Participate in carbon trading more efficiency and effectively

These CEMS tools can allow organisations to have greater awareness and be able to increase the efficiency and effectiveness of their current processes and procedures and meet carbon emission challenges. This chapter discusses the practical aspects of the use of such CEMS tools. This chapter first outlines the three categories of CEMS tools. This is followed by a comparative analysis of the various advantages and limitations of each of these tools. Finally, this report outlines the way in which the CEMS software can be used in organisations. Challenges related to configuring and implementing the software are discussed from a practical viewpoint.

This chapter is based on the author's experience including the author's work tenure with IT research firm Hydrasight and IT sustainability firm Connection Research, coupled with a short research project undertaken for his Master's level study, conducted as part of the Australian Computer Society's Computer Professional Education Program.

WHAT IS CEMS?

Carbon Emissions Management Emissions (CEMS) tools are, as defined by IT sustainability firm, Connection Research, as:

'a specific application designed to measure and report on the carbon emissions of an organisation using a consistent, defensible and repeatable methodology.' (Connection Research 2010 a)

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