

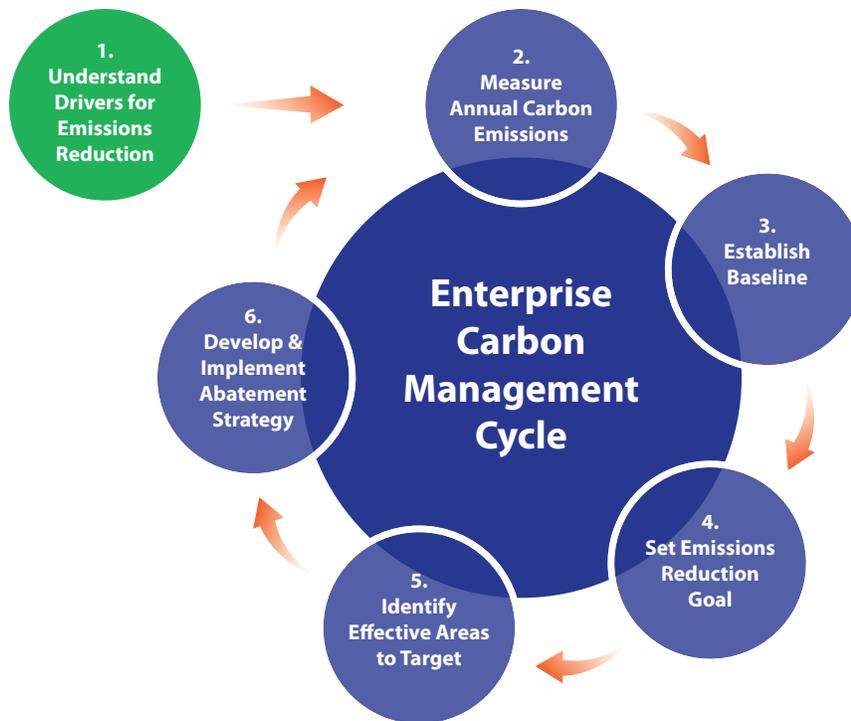
COPPERVALE INSIGHTS SERIES

Choosing the Right Carbon Emissions Reduction Path

Increasingly companies are quantifying carbon emissions and setting reduction goals. Sustainability experts forecast that in the next few decades, emissions recording, reporting—and eventually reduction—will become law for all industries as nations strive to decrease their collective carbon footprints. How should an MSO company go about choosing the right emissions reduction path? Coppervale can help.

➔ Steps to setting a realistic carbon reduction goal:

Using sector benchmarking, bespoke metrics and efficiency studies tailored to your network, coupled with an understanding of your unique business challenges, Coppervale will guide you through the following steps:



Understanding drivers for emissions reduction

In order to help set an appropriate target for emissions reductions, Coppervale will first help you understand drivers affecting your decision to reduce emissions. Drivers include addressing energy inefficiencies, cost reduction, improvement of public image, employee engagement and responding to investor pressure. We also look at unique factors which may include regional presence, fleet size and activity, and the sourcing mix of purchased electricity. We will also consider the future of your company, keeping in mind relevant growth factors such as the potential for mergers and acquisitions, technological improvements, or plans for plant-hardening or the replacement of equipment in the Outside Plant or Critical Infrastructure. We will also look at business goals to expand to new markets or products and services, and assess how these will affect the energy needs of the MSO. All of these factors will affect a strategic emissions reduction target.

Establishing a baseline

Coppervale will work with you to determine your current emissions footprint, taking into account any existing sustainability or energy management plans. This exercise is known as a baseline. Typically, Coppervale suggests that the MSO conduct a full "carbon audit" – similar to a financial audit, a carbon audit inventories, measures and reports the greenhouse gas (GHG) footprint of the company in carbon dioxide equivalents. MSOs' carbon footprints are impacted most heavily by fleet emissions, employee commuting, and powering the Outside Plant network and Critical Facilities.

Setting an emissions reduction goal

Upon establishing a baseline, Coppervale will help your company prepare to set an emissions reduction goal. Setting an actual emissions reduction goal is an exercise in setting accounting boundaries: the MSO must consider the scope of the overall goal and which operations it chooses to include (depending on the degree of operational control the MSO has to affect change in those areas). The target base year and time period, typically a 5-10 year reduction goal, must then be set. Finally, the MSO must choose whether to set their goal as an absolute or intensity-based metric for carbon reduction based on prospective reductions and taking into account growth prospects.

Identifying effective areas to target

Once you've established energy use and emissions baseline data, we will help you plan for effective areas to choose to target to achieve your emissions goals. Using bespoke KPIs to identify target areas, we will look at your operations to uncover "abatement sweet spots": opportunities where high energy costs and low operational efficiency intersect. This ensures the best business case for carbon abatement in addition to the environmental benefits.



Developing and implementing an abatement strategy

Coppervale will then craft an abatement strategy based on the identification of inefficient sites and operational areas. Often we will suggest a series of various efficiency solutions based on the best business cases for each, clearly showing the timeframe, cost savings and emissions reduction potential for each site. Coppervale can also diagnose and advise on the on-site replacement of inefficient equipment. Addressing inefficiencies is not the only portion of an abatement strategy, though: Coppervale will also consider purchasing of carbon offsets, altering utility energy sourcing, and addressing emissions throughout the supply chain – including manufacturing and end-of-life of consumer equipment.

Measuring progress over time

Coppervale will year-on-year re-audit the performance of specific efficiency projects as well as your overall abatement strategy. Because companies in the MSO industry often change their operational and financial portfolios with mergers and acquisitions, questions may emerge about the scope of your abatement plan year-over-year. Leveraging bespoke emissions efficiency metrics, Coppervale will help you make sense of operational changes and how they affect your abatement plans. We will also help you identify opportunities to report your successes, with our expertise in crafting CSR and sustainability reports, as well as disclosing emissions against frameworks like the Global Reporting Initiative (GRI) and the Carbon Disclosure Project (CDP).

The Importance of Metrics

When choosing carbon reduction goal and an abatement path, it's important to identify correct metrics for measuring progress against that goal. One example is the absolute emissions reduction metric, versus an intensity metric.

Absolute metrics are a measure of emissions reductions over time. *Intensity metrics* measure emissions reductions over time, relative to a key business metric. For example, Verizon, in 2011, chose to make a switch from absolute metrics reporting to implementing an intensity metric.* The metric measured Verizon's total carbon emissions relative to the number of terabytes of data that the company transports across its network. In 2012, Time Warner Cable followed suit, and announced a carbon intensity reduction goal of 15% by 2014, based on the same metric of carbon emissions per terabytes of data throughput.

* Verizon Corporate Sustainability Report 2012



About Coppervale

Coppervale Enterprises Inc. is the broadband industry's leading energy management, engineering and sustainability consultancy. Our team consists of energy and carbon management specialists, environmental and sustainability professionals, and veteran cable engineering consultants. Let Coppervale show you how to improve operational efficiency, reduce your energy costs, and minimize your carbon impact.

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