



(COP 25) USE OF NATURAL RESOURCES

A *Definition and applicability*

Natural resources are materials or substances found in nature, such as coal, mineral oil, natural gas, water, and forest products, that are used in human activities.

Source:

- Summarised from *RJC Code of Practices (2013)*

The **Use of Natural Resources** section of the COP is applicable to all Facilities.

The **Use of Natural Resources** section of the COP should be read and implemented in conjunction with the **Environmental Management**, and **Wastes and Emissions** sections of the COP.

B *Issue background*

Natural resources such as energy and water are increasingly the focus of efficiency measures in business. Efficiency improvements are one of the most effective ways to create business cost savings. They can be implemented in buildings and facilities, production processes and end-use products.

One of the strongest arguments for energy efficiency is that its benefits can often be easily forecasted, measured and calculated. Businesses can save energy in many ways including:

- Installing efficient lighting;
- Capturing and reusing waste heat;
- Regular scheduled equipment maintenance;
- Insulating buildings;
- Timers for heating and cooling systems;
- Energy efficient office appliances;
- Minimising the use of hot water;
- Equipment and process optimisation;
- Turning off all lights and equipment when they do not need to be operating.

Businesses have also generated significant cost savings from more efficiently using and treating water in their operations and facilities. Opportunities include:

- Fixing dripping taps and leaking pipes;
- Installing water saving accessories in the business (local water authorities can usually provide advice);
- Consider treating water for reuse rather than disposing;
- Avoid using water where dry techniques are available eg for cleaning or conveying materials;
- Substitution of potable water with lower quality (environmental and social value) water;
- Determine the minimum volume of water required for processes and make improvements where possible.

Metering water and energy consumption can identify what opportunities may exist in the business.

Inefficient use of fossil fuels can exacerbate the contribution of greenhouse gases into the environment leading to climate change. Climate change caused by greenhouse gases is one of the most serious challenges facing communities all over the world. Greenhouse gas abatement is not just for big business. Most measures to reduce energy consumption and greenhouse gas emissions will save money in the long term, increasing profitability. Reducing energy consumption and greenhouse gas emissions should be seen as an opportunity to provide businesses with a strong business advantage.

B *Issue background (cont)*

Carbon or emissions trading has become available in some markets. It is usually run by a government or central authority and aims to provide an economic incentive for businesses to reduce emissions. Carbon offsets generally refer to acts to mitigate emissions arranged by a commercial or not-for-profit provider. Offset methods include tree planting, renewable energy investment, energy conservation and methane capture. There are debates about the ultimate effectiveness of these approaches. They should be seen as complementary to more direct efforts to reduce energy consumption and emissions by facilities and operations, including transportation.

Other resources that businesses can target for efficiency measures include forest products (paper, cardboard and wood) and plastics (for example in packaging).

C *Key regulations*

INTERNATIONAL STANDARDS

Despite great advances in energy and water efficiency awareness, relatively few common standards exist. Most energy or water labelling programs, minimum efficiency standards and building codes are voluntary and vary depending upon industry sector and location. However where available, they can provide a means of comparison between different product and process choices.

The United Nations Framework Convention on Climate Change (1994) has been ratified by 192 countries, achieving near universal membership. The Climate Change Convention was created to begin considering what can be done to reduce global warming and how to cope with any inevitable changes. The Kyoto Protocol is an addition to the Convention. It is a legally binding agreement for signatories to reduce greenhouse gas emissions worldwide.

The International Finance Corporation (IFC) Performance Standard 3 – Resource Efficiency and Pollution Prevention (2012) provides detailed requirements and associated guidance for major development projects to:

- Promote more sustainable use of resources including energy and water
- Reduce project-related greenhouse gas emissions.

Specifically the Standard requires facilities to consider technically and financially feasible and cost effective measures throughout the life-cycle or the operation regarding consumption of energy, water and other materials. Cost-effectiveness is determined according to the capital and operational cost and financial benefits of the measure considered over the life of the measure. For the purpose of the IFC Performance Standard, a resource efficiency or greenhouse gas emissions reduction measure is considered cost-effective if it is expected to provide a risk-rated return on investment at least comparable to the project itself.

NATIONAL LAW

Governments at national and regional levels often set regulations, guidelines and industry targets for water and energy efficiency. Under the Convention, governments are required to launch national strategies for greenhouse gas emissions. This can involve national targets for emissions reductions, and include specific legislation and regulations relating to the use of energy and resources.

As this is a rapidly changing area, it is important to keep abreast of legal requirements and business incentives relating to energy and resource use.

D Suggested implementation approach

The Suggested implementation approach provides general guidance for implementing the mandatory requirements of the Code of Practices. The guidance is not normative and should be seen as a starting point for information and support.

COP 25.1: ENERGY AND WATER:

Members shall monitor energy and water usage in their business operations and put in place energy and water efficiency initiatives.

COP 25.2: OTHER RESOURCES:

Members shall identify other significant natural resources used in their business processes and seek to ensure their efficient use.

Points to consider:

- Virtually all workplaces require the use of energy, water and other natural resources, such as minerals and forest products.
- Members should identify sources of water extracted and consumed (for example by source, quality and/or quantity), energy consumed (for example identifying fuel type and/or quantity) and any other significant resources.
 - To the extent possible, energy usage should support the establishment of a balance showing emissions of greenhouse gases from key production activities.
 - Significance of other resource use could be determined by the type of the resource (eg scarcity or risk of impact), and/or the volume used by the business.
- Monitoring of consumption should in most cases be straightforward as the inputs must normally be purchased.
 - Monitoring of water and energy may not be practicable for smaller workplaces that are not separately metered, such as offices in an office building. In these cases, members should still implement initiatives to increase efficiency where feasible (see examples in section B above).
 - For larger workplaces and those that use processes that require the consumption of water, energy or other resources, Members should:
 - establish procedures to monitor consumption and track it over time
 - consider establishing targets for efficiency improvements
 - undertake technical analyses appropriate to the nature of the business processes to identify cost-effective efficiency improvements
 - adopt technically and financially feasible and cost-effective solutions to reduce consumption and/or increase efficiency.
 - Make use of information and advisory services from local utility providers and public agencies, where available and appropriate.
 - Consider use of energy audit services by qualified experts to provide detailed, written assessments of consumption and opportunities for efficiency improvements.
- Prioritise initiatives according to cost, savings and certainty.
 - Meaningful efficiency improvements can frequently be realised without new investments, and should be prioritised. For example, simple actions such as reminding workers to shut off equipment or lighting when not in use can be implemented with very little cost.
 - Consider simple payback calculations (how long it would take for an expenditure to be recovered through reduced consumption costs) to demonstrate and communicate the advantages of efficiency improvements and prioritise initiatives.
 - As a general rule, initiatives that generate a positive financial return should be implemented, unless other risks are identified.
 - Greenhouse gas emissions and efficient energy use over the lifecycle of each product, project or process should be taken into consideration when considering energy efficiency measures.

D *Suggested implementation approach (cont)*

CHECK:

- Are you monitoring energy and water usage?
- Have you put in place energy and water efficiency initiatives?
- Have you identified other significant natural resources used in the business, such as paper products?
- Can you show the auditor how you try to ensure they are used efficiently?

E *Further information*

The following websites have further information on water, energy and other natural resources:

- Business for Social Responsibility – Energy
www.bsr.org/en/our-work/industry-focus/energy
- Carbon Catalogue – Carbon Offset Directory
<http://forestcarbonportal.org/>
- Carbon Footprint – Reducing Your Impact
www.carbonfootprint.com/
- Environmental Protection Agency – Conserving Energy (Australia)
www.epa.vic.gov.au/bus/resource_efficiency/conserve_energy.asp
- Environmental Protection Agency – Conserving Water (Australia)
www.epa.vic.gov.au/bus/resource_efficiency/conserve_water.asp
- Friends of the Earth Scotland – Green Travel Plan
www.green-office.org.uk/audit.php?goingto=factsheet7
- Greenhouse Gas Protocol – Corporate Standard
www.ghgprotocol.org/standards/corporate-standard
- Intergovernmental Panel on Climate Change (IPCC)
www.ipcc.ch/publications_and_data/ar4/syr/en/mains1.html
- International Emissions Trading Association (IETA)
www.ieta.org/
- International Finance Corporation (IFC) Performance Standard 3 – Resource Efficiency and Pollution Prevention (2012)
http://www1.ifc.org/wps/wcm/connect/25356f8049a78eeeb804faa8c6a8312a/PS3_English_2012.pdf?MOD=AJPERES
- United Nations Framework Convention on Climate Change (UNFCCC) – The international response to climate change
unfccc.int/essential_background/items/2877.php
- United States Environmental Protection Agency – WaterSense
www.epa.gov/watersense/