Contractor Service Tips

Tip Card 20

Quick Facts - Global Warming

Q: What is global warming?

The Environmental Protection Agency (EPA) defines global warming as 'an increase in the near surface temperature of the earth.'

Global warming has occurred in the distant past as the result of natural influences, but the term is most often used today to refer to the climatic warming predicted to occur as a result of increased emissions of 'greenhouse gases.' The release of refrigerants into the atmosphere is considered to be a significant factor in contributing to the increase in global warming. Scientists generally agree that the earth's surface has warmed by about 1 degree Fahrenheit in the past 140 years. While this may not seem like much of a change, atmospheric scientists are concerned about this general warming trend and the impact that this has on many aspects of our lives such as economic prosperity, agricultural production, and pollution.

Q: What is meant by 'direct' and 'indirect' global warming?

Direct global warming is the measure of global warming potential (GWP) that each greenhouse gas contributes to the warming process if it is released 'directly' into the atmosphere.

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Indirect global warming considers the amount of contributing effect to global warming by the manufacture of greenhouse gases and their efficiency of operation. In other words, it takes energy from power plants, which also emit greenhouse gases, to manufacture the gases and operate the equipment that the greenhouse gases are used in. An example of such equipment would be an air conditioner with a SEER of 10 versus one with a SEER of 13. The 10 SEER unit would have a higher Indirect Warming Potential since it would not operate as efficiently.

Q: What is 'total equivalent warming impact' (TEWI)?

TEWI is the sum of a greenhouse gas's direct and indirect GWP. This value takes into consideration both the factor of direct release of the gas into the atmosphere and the indirect factor of the manufacture and lifetime operation of the system in which the gas is used. This factor is important because some greenhouse gases may have a low direct GWP but require more energy to manufacture or do not operate as efficiently as other gases with a higher direct GWP.

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