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April 2021

Greenhouse Effect

Center for Urban Resilience

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Repository Citation

Center for Urban Resilience, "Greenhouse Effect" (2021). *Module 03: Energy & Climate Change*. 36. <https://digitalcommons.lmu.edu/urbanecolab-module03/36>

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The Greenhouse Effect



Solar radiation:
343 Watts per
 m^2

Some of the solar radiation is reflected by the atmosphere and the Earth's surface

Outgoing solar radiation:
103 Watts per m^2

Some of the infrared radiation passes through the atmosphere and out into space

Outgoing infrared radiations:
240 Watts per m^2

Solar radiation passes through the atmosphere

Incoming solar radiation:
240 Watts per m^2

About half the solar radiation is absorbed by the Earth's surface

Absorption solar radiation:
168 Watts per m^2

Some of the infrared radiation is absorbed and re-emitted by the greenhouse gas molecules.

Radiation is converted to heat energy, causing the emission of longwave (infrared) radiation back to the atmosphere

Atmosphere
Greenhouse Gases

Earth