

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