

# Circular Economy Ontology Network (CEON) - Energy

## Metadata

**IRI**

<http://w3id.org/CEON/ontology/energy/>

**Title**

Circular Economy Ontology Network (CEON) - Energy

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**Date Created**

2024-11-01

**License**

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**Version Iri**

<http://w3id.org/CEON/ontology/energy/0.1/>

**Version Info**

0.1

**Preferred Namespace Prefix**

energy

**Preferred Namespace Uri**

<http://w3id.org/CEON/ontology/energy/>

**Description**

A module of the CEON ontology network defining aspects of the energy concept.

**Covers Requirements**

Covers the following requirements from Onto-DESIDE D3.1: CVN-Resource-1,3, CVN-Composition-1,2, CVN-ResrouceType-4, C7-3, E2-2, E4-6, E5-1, E6-3, T3-1.

## Classes

Anergy <sup>c</sup>	
<b>IRI</b>	<a href="http://w3id.org/CEON/ontology/energy/Anergy">http://w3id.org/CEON/ontology/energy/Anergy</a>
<b>Sub Class Of</b>	<a href="#">Energy<sup>c</sup></a>
<b>In Range Of</b>	<a href="#">hasAnergy<sup>op</sup></a>

## Biofuel<sup>C</sup>

**IRI** <http://w3id.org/CEON/ontology/energy/Biofuel>

**Sub Class Of** [Biomass<sup>C</sup>](#)

## Biogas<sup>C</sup>

**IRI** <http://w3id.org/CEON/ontology/energy/Biogas>

**Sub Class Of** [Biomass<sup>C</sup>](#)

## Biomass<sup>C</sup>

**IRI** <http://w3id.org/CEON/ontology/energy/Biomass>

**Sub Class Of** [EnergySource<sup>C</sup>](#)

**Super Class Of**  
[Biofuel<sup>C</sup>](#)  
[Biogas<sup>C</sup>](#)

## Coal<sup>C</sup>

**IRI** <http://w3id.org/CEON/ontology/energy/Coal>

**Sub Class Of** [FossilFuel<sup>C</sup>](#)

## Energy<sup>C</sup>

**IRI** <http://w3id.org/CEON/ontology/energy/Energy>

**Sub Class Of** <http://w3id.org/CEON/ontology/resourceODP/Resource>

**In Domain Of** [hasEnergySource<sup>op</sup>](#)

**Super Class Of**  
[Anergy<sup>C</sup>](#)  
[Exergy<sup>C</sup>](#)  
[NonRenewableEnergy<sup>C</sup>](#)  
[RenewableEnergy<sup>C</sup>](#)

## Energy Composition<sup>c</sup>

<b>IRI</b>	<a href="http://w3id.org/CEON/ontology/energy/EnergyComposition">http://w3id.org/CEON/ontology/energy/EnergyComposition</a>
<b>Sub Class Of</b>	<a href="http://w3id.org/CEON/ontology/actorODP/ResourceParticipation">http://w3id.org/CEON/ontology/actorODP/ResourceParticipation</a>
<b>In Domain Of</b>	<a href="#">hasEnergyComponentPercentage</a> <sup>dp</sup>

## Energy Conversion<sup>c</sup>

<b>IRI</b>	<a href="http://w3id.org/CEON/ontology/energy/EnergyConversion">http://w3id.org/CEON/ontology/energy/EnergyConversion</a>
<b>Sub Class Of</b>	<a href="http://w3id.org/CEON/ontology/actorODP/ResourceRelation">http://w3id.org/CEON/ontology/actorODP/ResourceRelation</a>

## Energy Infrastructure<sup>c</sup>

<b>IRI</b>	<a href="http://w3id.org/CEON/ontology/energy/EnergyInfrastructure">http://w3id.org/CEON/ontology/energy/EnergyInfrastructure</a>
<b>Sub Class Of</b>	<a href="http://w3id.org/CEON/ontology/actorODP/Infrastructure">http://w3id.org/CEON/ontology/actorODP/Infrastructure</a>

## Energy Source<sup>c</sup>

<b>IRI</b>	<a href="http://w3id.org/CEON/ontology/energy/EnergySource">http://w3id.org/CEON/ontology/energy/EnergySource</a>
<b>In Domain Of</b>	<a href="#">hasCarbonIntensity</a> <sup>dp</sup> <a href="#">hasSustainability</a> <sup>dp</sup>
<b>In Range Of</b>	<a href="#">hasEnergySource</a> <sup>op</sup>
<b>Super Class Of</b>	<a href="#">Biomass</a> <sup>c</sup> <a href="#">FossilFuel</a> <sup>c</sup> <a href="#">GeothermalEnergySource</a> <sup>c</sup> <a href="#">Hydropower</a> <sup>c</sup> <a href="#">SolarEnergySource</a> <sup>c</sup> <a href="#">Wind</a> <sup>c</sup>

## Exergy<sup>c</sup>

<b>IRI</b>	<a href="http://w3id.org/CEON/ontology/energy/Exergy">http://w3id.org/CEON/ontology/energy/Exergy</a>
<b>Sub Class Of</b>	<a href="#">Energy</a> <sup>c</sup>
<b>In Range Of</b>	<a href="#">hasExergy</a> <sup>op</sup>

## Fossil Fuel<sup>C</sup>

**IRI** <http://w3id.org/CEON/ontology/energy/FossilFuel>

**Sub Class Of** [EnergySource<sup>C</sup>](#)

**Super Class Of**  
[Coal<sup>C</sup>](#)  
[NaturalGas<sup>C</sup>](#)  
[Petroleum<sup>C</sup>](#)

## Geothermal Energy Source<sup>C</sup>

**IRI** <http://w3id.org/CEON/ontology/energy/GeothermalEnergySource>

**Sub Class Of** [EnergySource<sup>C</sup>](#)

## Hydropower<sup>C</sup>

**IRI** <http://w3id.org/CEON/ontology/energy/Hydropower>

**Sub Class Of** [EnergySource<sup>C</sup>](#)

## Natural Gas<sup>C</sup>

**IRI** <http://w3id.org/CEON/ontology/energy/NaturalGas>

**Sub Class Of** [FossilFuel<sup>C</sup>](#)

## Non Renewable Energy<sup>C</sup>

**IRI** <http://w3id.org/CEON/ontology/energy/NonRenewableEnergy>

**Sub Class Of** [Energy<sup>C</sup>](#)

## Petroleum<sup>C</sup>

**IRI** <http://w3id.org/CEON/ontology/energy/Petroleum>

**Sub Class Of** [FossilFuel<sup>C</sup>](#)

## Renewable Energy<sup>C</sup>

**IRI** <http://w3id.org/CEON/ontology/energy/RenewableEnergy>

**Sub Class Of** [Energy<sup>C</sup>](#)

## Solar Energy Source<sup>C</sup>

**IRI** <http://w3id.org/CEON/ontology/energy/SolarEnergySource>

**Sub Class Of** [EnergySource<sup>C</sup>](#)

## Wind<sup>C</sup>

**IRI** <http://w3id.org/CEON/ontology/energy/Wind>

**Sub Class Of** [EnergySource<sup>C</sup>](#)

## Object Properties

### has anergy<sup>op</sup>

**IRI** <http://w3id.org/CEON/ontology/energy/hasAnergy>

**Sub Property Of** <http://w3id.org/CEON/ontology/actorODP/participatingObject>

**Range** [Anergy<sup>C</sup>](#)

### has converted energy<sup>op</sup>

**IRI** <http://w3id.org/CEON/ontology/energy/hasConvertedEnergy>

**Sub Property Of** <http://w3id.org/CEON/ontology/actorODP/participatingResource>

**Range** [RenewableEnergy<sup>C</sup>](#) or [NonRenewableEnergy<sup>C</sup>](#)

### has energy source<sup>op</sup>

**IRI** <http://w3id.org/CEON/ontology/energy/hasEnergySource>

**Domain** [Energy<sup>C</sup>](#)

**Range** [EnergySource<sup>C</sup>](#)

has exergy<sup>op</sup>

**IRI** <http://w3id.org/CEON/ontology/energy/hasExergy>

**Sub Property Of** <http://w3id.org/CEON/ontology/actorODP/participatingObject>

**Range** [Exergy<sup>c</sup>](#)

has original energy<sup>op</sup>

**IRI** <http://w3id.org/CEON/ontology/energy/hasOriginalEnergy>

**Sub Property Of** <http://w3id.org/CEON/ontology/actorODP/participatingResource>

**Range** [RenewableEnergy<sup>c</sup>](#) or [NonRenewableEnergy<sup>c</sup>](#)

participating energy<sup>op</sup>

**IRI** <http://w3id.org/CEON/ontology/energy/participatingEnergy>

**Sub Property Of** <http://w3id.org/CEON/ontology/actorODP/participatingSubject>

## Datatype Properties

has carbon intensity<sup>dp</sup>

**IRI** <http://w3id.org/CEON/ontology/energy/hasCarbonIntensity>

**Domain** [EnergySource<sup>c</sup>](#)

has energy component percentage<sup>dp</sup>

**IRI** <http://w3id.org/CEON/ontology/energy/hasEnergyComponentPercentage>

**Domain** [EnergyComposition<sup>c</sup>](#)

has sustainability<sup>dp</sup>

**IRI** <http://w3id.org/CEON/ontology/energy/hasSustainability>

**Domain** [EnergySource<sup>c</sup>](#)

## Annotation Properties

description<sup>ap</sup>

**IRI** <http://purl.org/dc/elements/1.1/description>

contributor<sup>ap</sup>

**IRI** <http://purl.org/dc/terms/contributor>

created<sup>ap</sup>

**IRI** <http://purl.org/dc/terms/created>

creator<sup>ap</sup>

**IRI** <http://purl.org/dc/terms/creator>

description<sup>ap</sup>

**IRI** <http://purl.org/dc/terms/description>

license<sup>ap</sup>

**IRI** <http://purl.org/dc/terms/license>

title<sup>ap</sup>

**IRI** <http://purl.org/dc/terms/title>

preferred namespace prefix<sup>ap</sup>

**IRI** <http://purl.org/vocab/vann/preferredNamespacePrefix>

preferred namespace uri<sup>ap</sup>

**IRI** <http://purl.org/vocab/vann/preferredNamespaceUri>

covers requirements<sup>ap</sup>

<b>IRI</b>	<a href="http://www.ontologydesignpatterns.org/schemas/cpannotationschema.owl#coversRequirements">http://www.ontologydesignpatterns.org/schemas/cpannotationschema.owl#coversRequirements</a>
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definition<sup>ap</sup>

<b>IRI</b>	<a href="http://www.w3.org/2004/02/skos/core#definition">http://www.w3.org/2004/02/skos/core#definition</a>
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pref label<sup>ap</sup>

<b>IRI</b>	<a href="http://www.w3.org/2004/02/skos/core#prefLabel">http://www.w3.org/2004/02/skos/core#prefLabel</a>
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## Namespaces

:

<http://w3id.org/CEON/ontology/energy/>

**dc**

<http://purl.org/dc/elements/1.1/>

**dcterms**

<http://purl.org/dc/terms/>

**geo**

<http://www.opengis.net/ont/geosparql#>

**odp**

<http://www.ontologydesignpatterns.org/schemas/cpannotationschema.owl#>

**owl**

<http://www.w3.org/2002/07/owl#>

**prov**

<http://www.w3.org/ns/prov#>

**rdf**

<http://www.w3.org/1999/02/22-rdf-syntax-ns#>

**rdfs**

<http://www.w3.org/2000/01/rdf-schema#>

**skos**

<http://www.w3.org/2004/02/skos/core#>

**vann**

<http://purl.org/vocab/vann/>

## Legend

c

Classes

op

Object Properties

dp

Datatype Properties



