

Circular Economy Ontology Network (CEON) - Energy

Metadata

IRI

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

Title

Circular Economy Ontology Network (CEON) - Energy

Creator

Huanyu Li

Contributor

Eva Blomqvist

Mikael Lindecrantz

Robin Keskisärkkä

Date Created

2024-11-01

License

<https://creativecommons.org/licenses/by/4.0/>

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-ResourceType-4, C7-3, E2-2, E4-6, E5-1, E6-3, T3-1.

Classes

Anergy ^c	
IRI	http://w3id.org/CEON/ontology/energy/Anergy
Sub Class Of	Energy^c
In Range Of	hasAnergy^{op}

Biofuel^C

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

Sub Class Of [Biomass^C](#)

Biogas^C

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

Sub Class Of [Biomass^C](#)

Biomass^C

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

Sub Class Of [EnergySource^C](#)

Super Class Of
[Biofuel^C](#)
[Biogas^C](#)

Coal^C

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

Sub Class Of [FossilFuel^C](#)

Energy^C

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

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

In Domain Of [hasEnergySource^{op}](#)

Super Class Of
[Anergy^C](#)
[Exergy^C](#)
[NonRenewableEnergy^C](#)
[RenewableEnergy^C](#)

Energy Composition^c

IRI	http://w3id.org/CEON/ontology/energy/EnergyComposition
Sub Class Of	http://w3id.org/CEON/ontology/actorODP/ResourceParticipation
In Domain Of	hasEnergyComponentPercentage ^{dp}

Energy Conversion^c

IRI	http://w3id.org/CEON/ontology/energy/EnergyConversion
Sub Class Of	http://w3id.org/CEON/ontology/actorODP/ResourceRelation

Energy Infrastructure^c

IRI	http://w3id.org/CEON/ontology/energy/EnergyInfrastructure
Sub Class Of	http://w3id.org/CEON/ontology/actorODP/Infrastructure

Energy Source^c

IRI	http://w3id.org/CEON/ontology/energy/EnergySource
In Domain Of	hasCarbonIntensity ^{dp} hasSustainability ^{dp}
In Range Of	hasEnergySource ^{op}
Super Class Of	Biomass ^c FossilFuel ^c GeothermalEnergySource ^c Hydropower ^c SolarEnergySource ^c Wind ^c

Exergy^c

IRI	http://w3id.org/CEON/ontology/energy/Exergy
Sub Class Of	Energy ^c
In Range Of	hasExergy ^{op}

Fossil Fuel^C

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

Sub Class Of [EnergySource^C](#)

Super Class Of
[Coal^C](#)
[NaturalGas^C](#)
[Petroleum^C](#)

Geothermal Energy Source^C

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

Sub Class Of [EnergySource^C](#)

Hydropower^C

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

Sub Class Of [EnergySource^C](#)

Natural Gas^C

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

Sub Class Of [FossilFuel^C](#)

Non Renewable Energy^C

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

Sub Class Of [Energy^C](#)

Petroleum^C

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

Sub Class Of [FossilFuel^C](#)

Renewable Energy^C

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

Sub Class Of [Energy^C](#)

Solar Energy Source^C

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

Sub Class Of [EnergySource^C](#)

Wind^C

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

Sub Class Of [EnergySource^C](#)

Object Properties

has anergy^{op}

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

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

Range [Anergy^C](#)

has converted energy^{op}

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

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

Range [NonRenewableEnergy^C](#) or [RenewableEnergy^C](#)

has energy source^{op}

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

Domain [Energy^C](#)

Range [EnergySource^C](#)

has exergy^{op}

IRI	http://w3id.org/CEON/ontology/energy/hasExergy
<u>Sub Property Of</u>	http://w3id.org/CEON/ontology/actorODP/participatingObject
<u>Range</u>	Exergy ^c

has original energy^{op}

IRI	http://w3id.org/CEON/ontology/energy/hasOriginalEnergy
<u>Sub Property Of</u>	http://w3id.org/CEON/ontology/actorODP/participatingResource
<u>Range</u>	RenewableEnergy ^c or NonRenewableEnergy ^c

participating energy^{op}

IRI	http://w3id.org/CEON/ontology/energy/participatingEnergy
<u>Sub Property Of</u>	http://w3id.org/CEON/ontology/actorODP/participatingSubject

Datatype Properties

has carbon intensity^{dp}

IRI	http://w3id.org/CEON/ontology/energy/hasCarbonIntensity
<u>Domain</u>	EnergySource ^c

has energy component percentage^{dp}

IRI	http://w3id.org/CEON/ontology/energy/hasEnergyComponentPercentage
<u>Domain</u>	EnergyComposition ^c

has sustainability^{dp}

IRI	http://w3id.org/CEON/ontology/energy/hasSustainability
<u>Domain</u>	EnergySource ^c

Annotation Properties

description^{ap}

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

contributor^{ap}

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

created^{ap}

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

creator^{ap}

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

description^{ap}

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

license^{ap}

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

title^{ap}

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

preferred namespace prefix^{ap}

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

preferred namespace uri^{ap}

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

covers requirements^{ap}

IRI	http://www.ontologydesignpatterns.org/schemas/cpannotationschema.owl#coversRequirements
-----	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

definition^{ap}

IRI	http://www.w3.org/2004/02/skos/core#definition
-----	-------------------------------------------------------------------------------------------------------------

pref label^{ap}

IRI	http://www.w3.org/2004/02/skos/core#prefLabel
-----	-----------------------------------------------------------------------------------------------------------

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

