

Circular Economy Ontology Network (CEON) - Energy Module

Metadata

IRI

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

Title

Circular Economy Ontology Network (CEON) - Energy Module

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 D3.2: CE1-2, CE4-3, CE6-3, CE7-4, CE8-2, CE10-7, CE10-9, CE11-6, CE12-5.

Classes

| | |
|----------------------|---|
| 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
[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/CE0N/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](#)

Fossil Fuel^C

IRI <http://w3id.org/CE0N/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/CE0N/ontology/energy/GeothermalEnergySource>

Sub Class Of [EnergySource^C](#)

Hydropower^C

IRI <http://w3id.org/CE0N/ontology/energy/Hydropower>

Sub Class Of [EnergySource^C](#)

Natural Gas^C

IRI <http://w3id.org/CE0N/ontology/energy/NaturalGas>

Sub Class Of [FossilFuel^C](#)

Non Renewable Energy^C

IRI <http://w3id.org/CE0N/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>

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>

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

has original energy^{op}

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

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

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

participating energy^{op}

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

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

Datatype Properties

has carbon intensity^{dp}

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

Domain [EnergySource^c](#)

has energy component percentage^{dp}

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

Domain [EnergyComposition^c](#)

has sustainability^{dp}

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

Domain [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/cpannotation/schema.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 |
| ap | Annotation Properties |