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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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 D2.3: CE1-2, CE4-3, CE6-3, CE7-4, CE8-2, CE10-7, CE10-9, CE11-6, CE12-5.

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	RenewableEnergy ^c *or* NonRenewableEnergy ^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
Range	Exergy ^c

has original energy ^{op}

IRI	`http://w3id.org/CEON/ontology/energy/hasOriginalEnergy`
Sub Property Of	http://w3id.org/CEON/ontology/actorODP/participatingResource
Range	NonRenewableEnergy ^c *or* RenewableEnergy ^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/voc
ab/vann/preferredNa
mespaceUri
```

covers requirements ap

IRI

```
http://www.ontology
designpatterns.org/
schemas/cpannotatio
nschema.owl#coversR
equirements
```

definition ap

IRI

```
http://www.w3.org/2
004/02/skos/core#de
finition
```

pref label ap

IRI

```
http://www.w3.org/2
004/02/skos/core#pr
efLabel
```

Namespaces

:

```
http://w3id.org/CEON/ontology/en
ergy/
```

dc

```
http://purl.org/dc/elements/1.1/
```

dcterms

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

geo

http://www.opengis.net/ont/geosp
arql#

odp

http://www.ontologydesignpattern
s.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/c
ore#

vann

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

Legend

c	Classes
op	Object Properties
dp	Datatype Properties
ap	Annotation Properties