

## OEO Developer Meeting #32

### Pads:

- Pad to this meeting: <https://etherpad.wikimedia.org/p/oeo-dev-32>
- Pad for next meeting: <https://etherpad.wikimedia.org/p/oeo-dev-33>
- Notes from last meeting: <https://etherpad.wikimedia.org/p/oeo-dev-31>

**Date: 10.02.2022, 10:00 -- 12:00 a.m.**

### Participants:

- moderator: MS
- main reporter: CM
- next meeting organiser: Vera

### Preparation:

- Read last protocol:  
<https://github.com/OpenEnergyPlatform/ontology/wiki/OEO-developer-meetings>
- Check issues for next release:  
<https://github.com/OpenEnergyPlatform/ontology/milestones>
- Load software (GitHub, git, Protégé, DFN)
- Connection: Teams

### Agenda:

- New colleague from DLR joining: Eugenio Salvador Arellano Ruiz
- MS Teams connection for today: see above
  - is everyone part of the OEO-DEV mailing list?
    - ask Carsten for access to mailing list
  - Fraunhofer can't provide Teams Meetings with dial-in option --> **HF** provides link for next meetings
- biofuels and origin  
<https://github.com/OpenEnergyPlatform/ontology/issues/872#issuecomment-1013154836> --> LE (could we start with this issue because KS has to leave earlier?)
  - definition of origin changed -> subclasses need adaptation
  - which subclass of 'origin' should be used for subclass of portion of matter or energy or both or discuss case-dependent?
    - subclasses distinguish between portion of matter and energy -> can be either - each subclass doesn't need to cover both
    - 'sustainable' term needs discussion
    - 'geogenic' - should be used for energy -> add 'energy' to 'geogenic'
    - 'fossil'

- 'fossil energy' specify that originated from fossil fuel - is the chemical energy of the fossil combustion fuel and has relation to some energy carrier that has origins in some fossil
    - relation: 'energy carrier' <> 'energy': has quality of
  - 'renewable'
    - replace 'renewable' with 'biogenic' in definition
    - alternative term: renewable waste fuel
    - 'renewable' as origin itself could be a problem -> quality of quality - not possible with bfo
  - 'renewable' disjoint with conventional, biogenic disjoint with fossil
  - make 'synthetic' subclass of anthropogenic
  - 'biofuel' discussion postponed
- Human readable Ontology [CHK]
    - Is there a way to create a human readable except of the OEO, which mainly contains the keys/terms we defined and their textual description, to have it in pdf document?
    - easy way to promote / show OEO to non-experts
    - robots export in csv -> further processing from there (<http://robot.obolibrary.org/export>)
    - OEO viewer in OEP to show some class and subclasses
    - automated md-file creation: id & label & definitions
    - CHK opens issue: <https://github.com/OpenEnergyPlatform/ontology/issues/1020>
  - Release - Next release 1.9.0 on March 1st!
    - 24 open issues, many dependencies between issues
    - <https://github.com/OpenEnergyPlatform/ontology/issues?q=is%3Aopen+is%3Aissue+milestone%3Aoeo-release-1.9.0>
  - Annotation properties - <https://github.com/OpenEnergyPlatform/ontology/issues/617> --> **JH**
    - to solve issue, missing axioms added
      - inconsistencies with other axioms,
      - axioms from our relations and removed some when inconsistencies occurred,
      - market exchange, market exchange participant
      - detailed pull request submitted and reviewed by LE
        - <https://github.com/OpenEnergyPlatform/ontology/pull/1019>
      - distinction between independent continuant vs
      - document where OEO not follows ranges and axioms
        - use comment or editor note
      - market participant (role)
        - some connection to market exchange still needed (reciprocal relation) -> .. who is **part of** a market exchange

- not possible due to independent continuant
- market exchange
  - implement -> market exchange has a participant that has a role market exchange participant
- OnToology - <https://github.com/OpenEnergyPlatform/ontology/issues/25> [MG]
  - postponed to next meeting
- Automated annotation for module identification - <https://github.com/OpenEnergyPlatform/ontology/issues/870> [MG, AM]
  - intermediate result?
  - more discussions with Martin needed
  - postponed to next meeting
- Review of axioms for terms in:
  - <https://github.com/OpenEnergyPlatform/ontology/issues/891> [HG]
- follow-up on oil and oil products <https://github.com/OpenEnergyPlatform/ontology/issues/811> [LE]
- background
  - 'oil and petroleum products' subclass structure doesn't suit our needs anymore
  - distinguish: chemical properties <> their usage <> production
  - 1 issue with 'oil and petroleum products' subclass
  - 1 issue biofuels
  - 1 issue biogasoline / biodiesel <https://github.com/OpenEnergyPlatform/ontology/issues/960>
  - distinguish fuels by chemical properties; & introduce role (how it can be used); & origin of fuels; role applicable to fossil / bio diesel fuel; chemical properties very similar
    - will allow: group them by classes (origins / roles (group chemically similar fuels biodiesel & diesel))
  - further distinction of gasoline engine & diesel engine (for cars)
  - proposal is accepted
- 'oil and petroleum products' still needed as parent class for liquid fuels?
  - hydrocarbons -> subclass of portion of matter
    - include fuels in this subclass 'gasoline' instead
    - definition hydrocarbons: is a portion of matter but consists only of hydrogen and carbon atoms
    - with a chemical formula ... contains of molucules that contain only/mainly c and h atoms
  - **decision:** include all fuels directly within 'portion of matter' for now; group later if needed; delete 'oil and petroleum products class' & redefine its subclasses under 'portion of matter'
  - **Hydrocarbons** can be further distinguished by their chemical

structure: Aliphatic hydrocarbons, cycloaliphatic hydrocarbons, aromatics of these. However, we probably do not need this full structure, but probably only parts as we don't want to build a chemistry ontology.

- **Synthetic fuels** can be clustered by either chemical structure and properties or by raw material and production process.
  - **Diesel** is somehow a property of a couple of different hydrocarbons with the common thing that they can be used in a Diesel engine. This calls for introducing something like a diesel fuel role and define Diesel fuel as equivalent to 'combustion fuel' and 'has role' some 'diesel fuel role'. (Additionally we might also add a diesel engine as *A diesel engine is an internal combustion engine that uses a diesel fuel*, but this is probably out of scope of this issue.)
- 
- uses / produces / has physical input / has physical output / has energy input / has energy output  
<https://github.com/OpenEnergyPlatform/ontology/issues/994> [LE]
    - This seems to be solved now, but we can present the new solution.
    - status quo:
      - produces (used for artificial objects /power plants / energy converting units.. -> relate them to energy output
      - process: has physical input / output
    - energy is not material entity - domains and ranges will make fail
    - device / process that has energy in/output - special object property wanted
    - has energy participant - as top property (not sub of has participant)
      - has energy input / has energy output
      - where to include them?
    - generally relations should be avoided - in this case could be good idea due to complexity of energy
      - own relations for axioms related to energy
      - would introduce many changes | increase clarity
    - lose has participant relation
    - proceed with  
<https://github.com/OpenEnergyPlatform/ontology/pull/1006>