

BIOMASS (1)

DIDACTIC MATERIALS

Contact

VIPSKILLS Project Coordinator:

[vipskills\[at\]pb.edu.pl](mailto:vipskills[at]pb.edu.pl)

Virtual and Intensive Course
Developing Practical Skills
of Future Engineers

VIPSKILLS
Erasmus+ 2010-1-PL01-AA210-G2-1122



Virtual and Intensive Course Developing

Practical Skills of Future Engineers

www.vipskills.pb.edu.pl

1. GENERAL KNOWLEDGE

Biomass

- biologically degradable origin wastes of agriculture, forestry and forest agriculture connected with raw material wastes and scraps of industry branches, also biologically degradable industrial and municipal wastes.



World energy council (WEC) declared three objectives of energy supply:

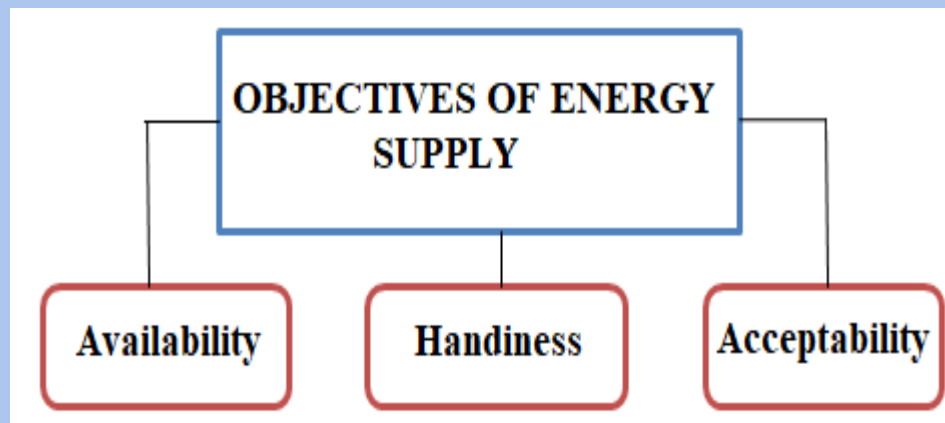


Fig. 1. Energy supply potential for WEC

*One of the most common types of renewable energy – **bioenergy**.*

- *ENERGY* (in greek – action, operation) – total quantification of standart movement parameters of different forms of materials.

- *Finite energy resources* – dug up or otherwise extracted resources from entrails of the earth:

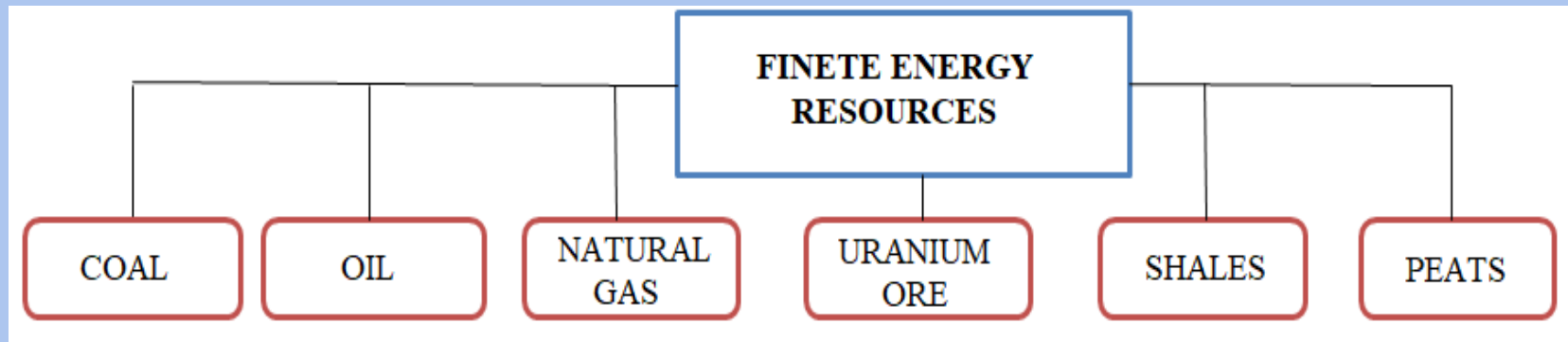


Fig. 2. Scheme of finite energy resources

- **RER** (**r**enewable **e**nergy **r**esources) – resources, which always renews or in short period of time and can be used unlimited long time:

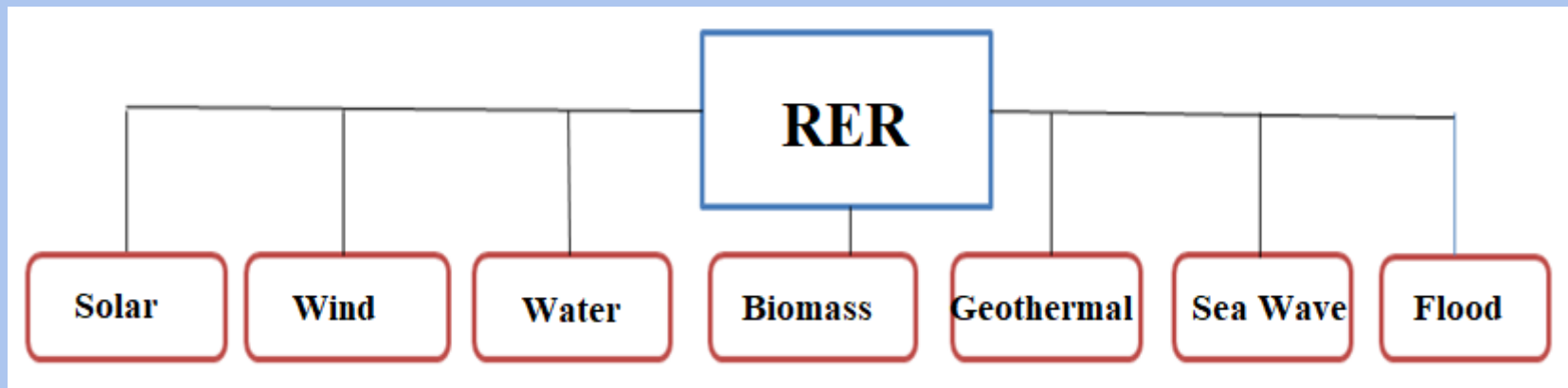


Fig. 3. Classification of RER

BIOMASS – organic non-fossil material of biological origin

PRIMARY BIOMASS – rapidly growing plant material, which can be used directly or after certain processing, for power

BIOGAS – mixture of methane and carbon dioxide is produced anaerobically by fermenting biomass

BIOFUEL – fuel, obtained as biomass processing product



References

1. *Biomasės panaudojimo galimybės energijos gamybai CŠT sektoriuje (The usage possibilities of biomass energy production in CHNB sector)*. Paruošė A. Jakštas. Vilnius, 2011.
2. Kytra, S. *Atsinaujinantys energijos šaltiniai (Renewable Energy Resources)*. Kaunas: Technologija, 2006.
3. *Lietuvos Respublikos Atsinaujinančių išteklių energetikos įstatymas (Republic of Lithuania Law Renewable Energy)*. 2011-05-26 No. 62-2936. Aktuali redakcija nuo 2016-03-0.
4. http://biokuras.lt/uploads/new_assigned_files/1.%20Egidijus%20Puida.%20Seksija%20B.pdf.
5. <http://www.agroakademija.lt/inzinerija/energetika/?SIId=1183>
6. <http://energetikosabc.lt/lt/atsinaujinantys-istekliai/kokios-yra-biokuro-rusys/biodegalai/158>

The presentation is available on license
Creative Commons Attribution-ShareAlike 4.0 International



Virginija Urbonienė
Vilnius College of Technologies and Design

EN	<p>This project has been funded with support from the European Commission. This publication [communication] reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.</p>
PL	<p>Publikacja została zrealizowana przy wsparciu finansowym Komisji Europejskiej. Publikacja odzwierciedla jedynie stanowisko jej autorów i Komisja Europejska oraz Narodowa Agencja Programu Erasmus+ nie ponoszą odpowiedzialności za jej zawartość merytoryczną.</p>
ES	<p>El presente proyecto ha sido financiado con el apoyo de la Comisión Europea. Esta publicación (comunicación) es responsabilidad exclusiva de su autor. La Comisión no es responsable del uso que pueda hacerse de la información aquí difundida.</p>
LT	<p>Šis projektas finansuojamas remiant Europos Komisijai. Šis leidinys [pranešimas] atspindi tik autoriaus požiūrį, todėl Komisija negali būti laikoma atsakinga už bet kokį jame pateikiamos informacijos naudojimą.</p>