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Chair, Task Force on
Application of UNFC to
Renewable Energy

Application of UNFC-2009 to
Renewable Energy Resources
EGRC Meeting, 28 April 2016

Resource Classification

WHY?

- **Energy resources are not equal, whether they are measured in volumes like oil & gas OR in power units like many Renewable Energies**
- For instance, a project with 100 million boe **Proved Developed Reserves** is very different from a project with 100 million boe **Prospective Resources**.
- The former is producing and turning its volumes into cash, while the latter has not yet discovered its volumes, and even less initiated their development.
- For investors and customers, the former is likely to have much more value than the latter – a difference immediately visible in the classification of their resources.
- **A classification is thus key to describe resources in a representative way reflecting their maturity and uncertainty and capturing their present value.**

Renewable Classification Task Force History (1)

- UNECE called upon the EGRC to “*develop ideas on how the UNFC could apply to and integrate renewable energy by December 2013*”
- Separately, an industry-led group developed a methodology for Renewable Energy classification (London workshop) and reported results and recommendations to the EGRC in April 2013
- In mid 2013, the EGRC established a **Task Force to develop Specifications for the application of the UNFC-2009 to Renewable Energy Resources**

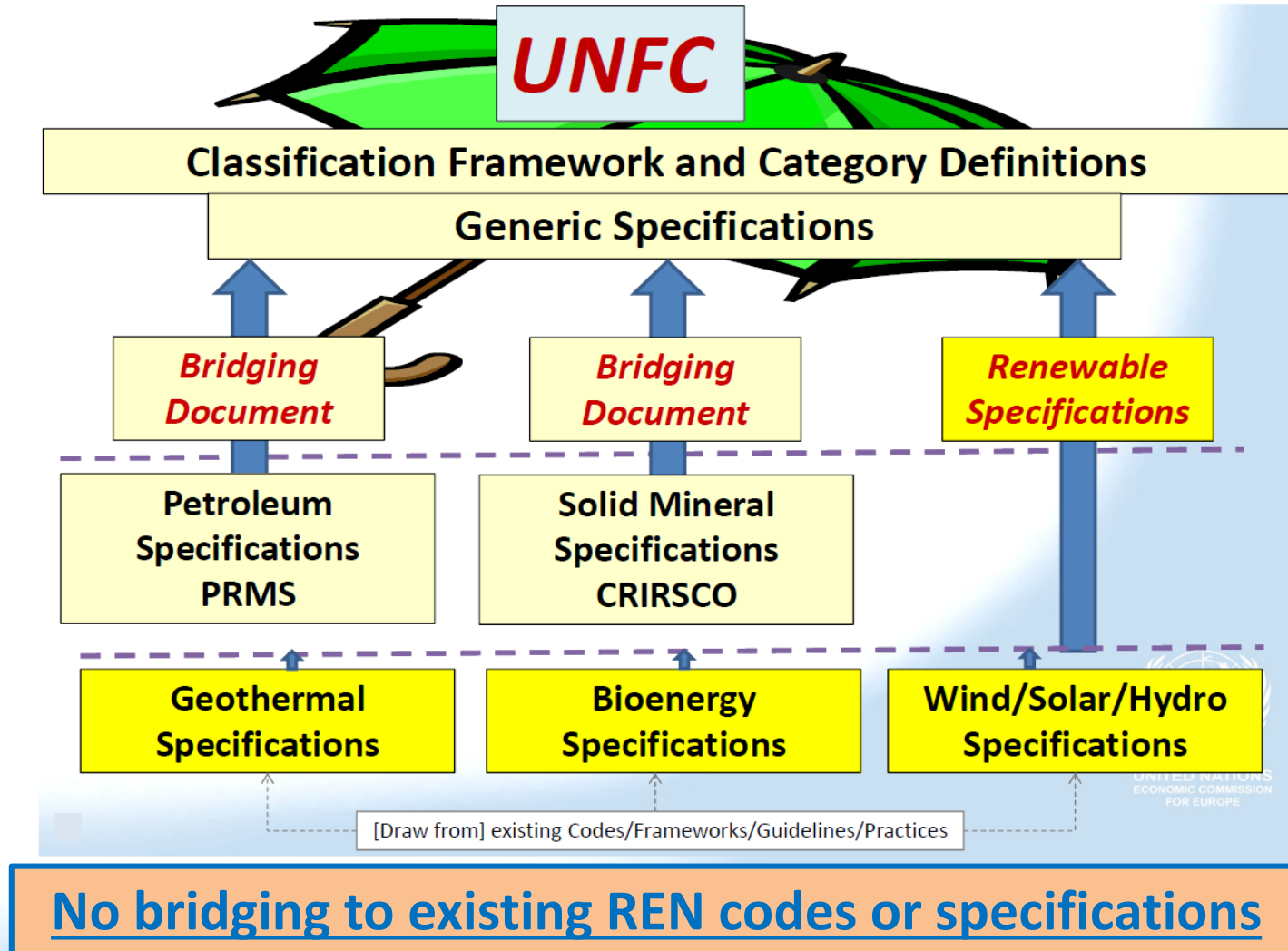
Renewable Classification Task Force

History (2)

- The Task Force presented **draft Generic Renewable Specifications** at the 5th session of the EGRC in 2014 and an updated draft at the 6th session in 2015
- In 2015, the Task Force initiated two Working Groups (Geothermal & Bioenergy, with a contingency for Wind & Solar) to develop **commodity-specific Specifications**

UNFC-2009

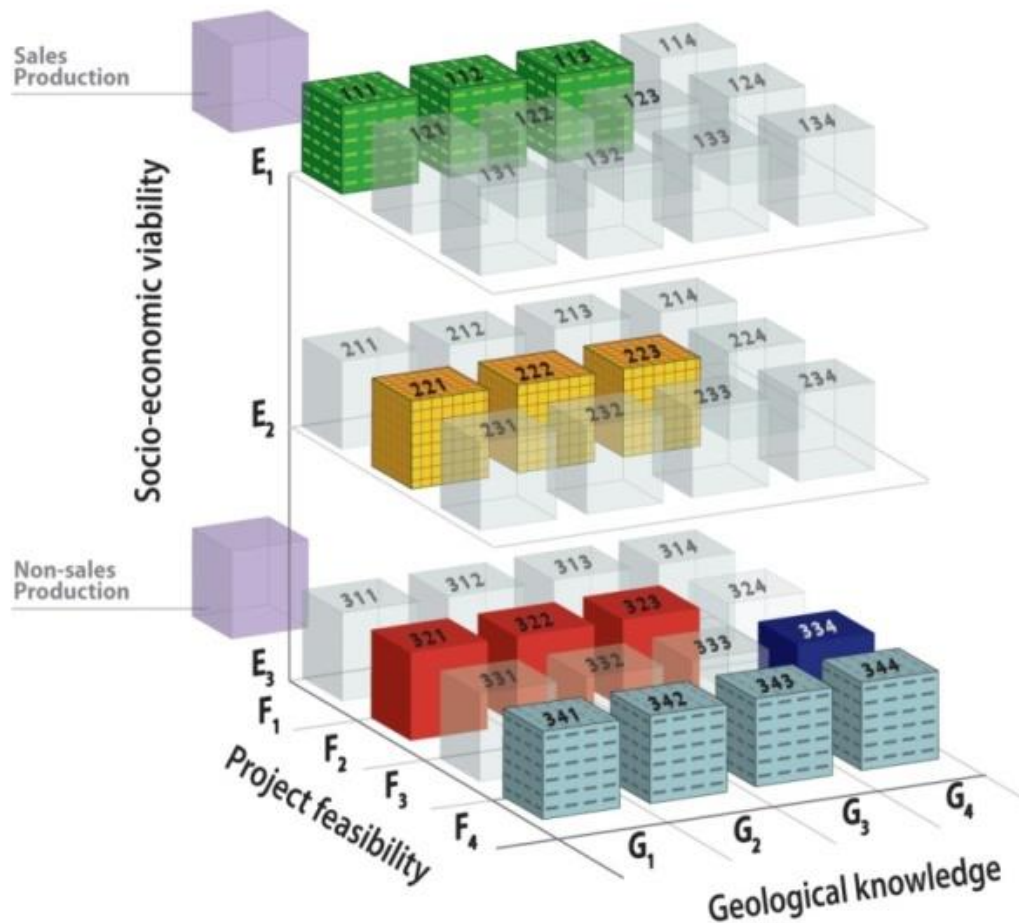
for Fossile AND Renewable Energies



UNITED NATIONS
ECONOMIC COMMISSION
FOR EUROPE

UNFC-2009 for Fossile Energies

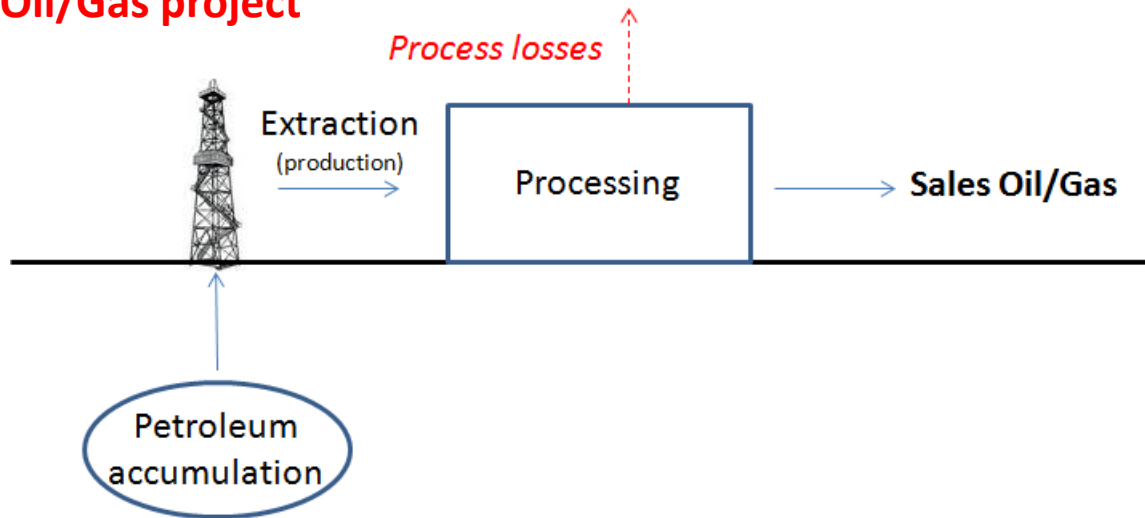
The Model



The Concept

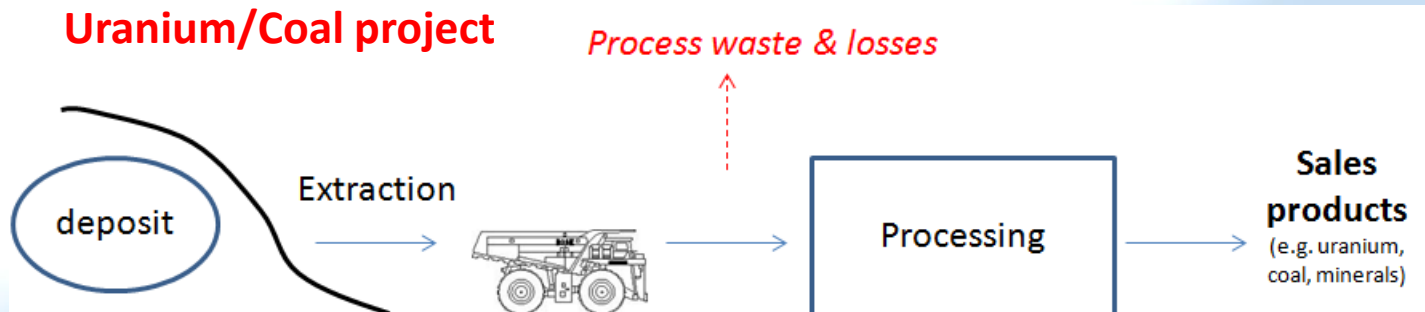
A “Project-Based” Classification

Oil/Gas project

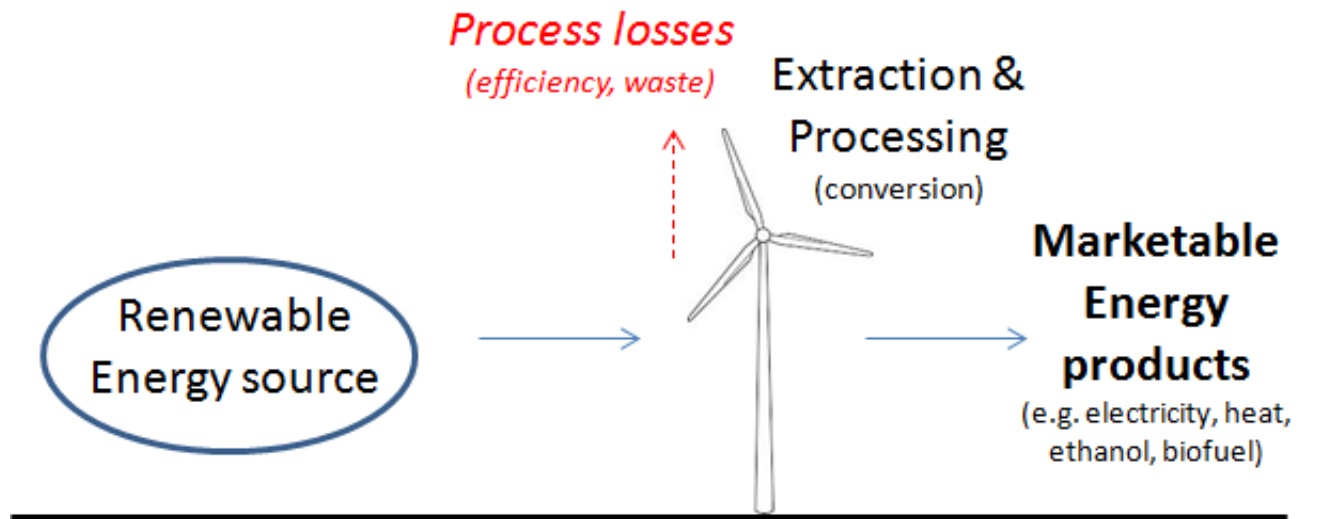


The **project** represents the level where a decision is made to proceed (i.e., spend money or not)

Uranium/Coal project



Renewable and Fossil Energy Projects are very similar



The **Project** is the link between the Renewable Energy Source and sales quantities of Energy Products.

The **Project** provides the basis for economic evaluation and decision-making

Progress to Date

- **Developed Generic Renewable Specifications**, with comments from TAG, public, Geothermal WG and Bioenergy WG. Submitting to EGRC for endorsement.
- **Developed Geothermal-specific Specifications with IGA**, with input from IGA R&R, TAG, EGRC Bureau, GEA, G-axis WG, E-axis WG, Bioenergy WG. Submitting to EGRC for approval to post for public comments.
- **Developing Biomass-specific Specifications**. Sharing progress with EGRC for steering support.
- Formed **G-axis Working Group**. Reporting to EGRC on progress/proposals.
- A **Wind WG** is being initiated with representatives of onshore and offshore wind industry, aiming at developing Wind-specific Specifications for 2017.

IRENA Classification (1)

- UNECE has been informed of the existence of **another Classification for Renewable Energies**, developed by IRENA.
- UNECE has requested the Task Force to **compare the UNFC-2009 for Renewable Energies and the IRENA Classification**, to ensure no duplication exists.
- IRENA has provided the Task Force Chair with its latest Classification and Definitions for Energies and Renewable Energies, for review and comments.
- The Task Force has conducted this Review resulting in the following understanding and recommendation.

IRENA Classification (2)

The **IRENA classification** of energy products identifies and defines the main types of renewable energy and is used to collect, analyze and present renewable energy statistics.

In IRENA Classification, energy products are divided into different categories at four different levels:

- 1. Top level:** separates energy products into renewables and non-renewables.
- 2. Second level:** subdivides into hydropower; marine energy; wind energy; solar energy; bioenergy; geothermal energy; and other renewable energy. Electricity and heat produced are also identified at that level.
- 3. Third level:** divides by technology (e.g. onshore or offshore wind energy).
- 4. Fourth level:** separates by more detailed characteristics, mostly used for bioenergy.

Conclusion: The IRENA and UNFC-2009 Classifications have different purposes and **are clearly complementary.**

Work Plan 2016-20

1. Maintain and update (as required) the draft **Generic Renewable Specifications** for the application of UNFC-2009 to Renewable Energies
2. Develop **Commodity-Specific Specifications** for the application of UNFC-2009 to Geothermal Energy, Bioenergy and Solar, Wind and Hydro Energies
3. Initiate, progress and complete new Work Streams (**Wind, Solar, Hydro**) accordingly, building on the experience of Geothermal and Biomass
4. Develop **guidelines and case studies** for the application of the UNFC-2009 to Renewable Energies
5. **Communicate to key stakeholders** for adoption and value creation
6. Design **governance and support model** to ensure “evergreen” Specifications

Challenges

- **Use of “G-axis”**

The UNFC-2009 describes finite deposits with associated geological uncertainties. The use of the G-axis may feel confusing for some Renewable Energy stakeholders

- **Use of “Projects”**

Renewable industry is using “Annual Capacity” and “Potential”. It is key that the Guidance on “Projects” prepared by Jim Ross is adopted and used by the Renewable Energy community, as key to planning, valuation and execution.

- **Decentralisation and diversity**

Renewable Energies have many stakeholders, different and fragmented. Call all stakeholders be appropriately engaged?

- **Ownership, expertise and maintenance**

Who will “own” the Specifications? Who will act as “Subject Matter Experts”? Who will “maintain” and communicate the Specifications?

Conclusions and Recommendations

- Environmental and societal pressures are rapidly increasing to **“de-carbonize our ways of living”**
- **Renewable energies are playing a critical role for that purpose.**
They must be developed urgently and used most effectively
- For this to take place, **investors** must have **compelling business cases to finance these new developments**
- The **UNFC-2009** applied to Renewable Energies provides a universally recognized system **to help build these business cases and foster the growth of Renewable Energies**

Call for Help

- The Renewable Energy Classification project is conducted by a group of part-time and voluntary people from all horizons
- We are passionate about Renewable Energies and wish our work will play a key role in progressing Renewable Energies in the world
- **Yet, we need HELP!**
- We need HELP from the Renewable Energy Industry and the Renewable Energy users to ensure their experience and needs are best reflected
- If you are interested to join our Task Force – or know anybody who would be – please contact me:

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