

UNFC-based Resource Classification for Renewable Energies



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Work Group
on Application of UNFC to Renewable Energy**



Setting the scene: RE-Thinking Energy 2017 (IRENA)

(Quote)

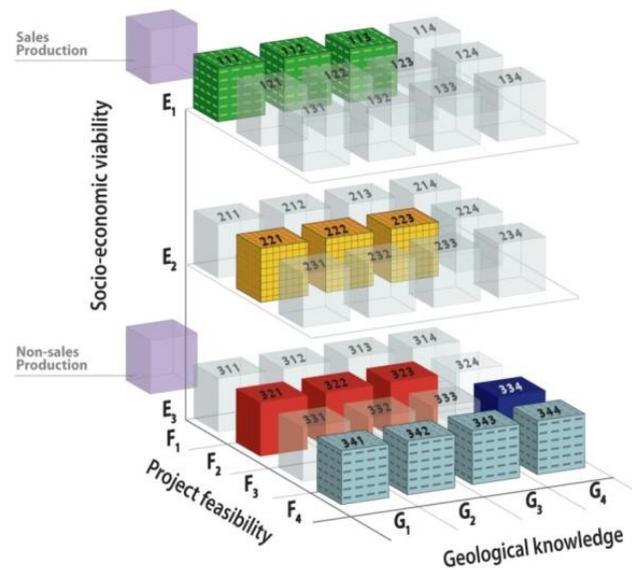
1. Global renewable energy deployment has increased rapidly and **continues to grow** at an unprecedented pace
2. Increasing the share of renewable energy in the world's energy mix to **36% by 2030** is achievable
3. These developments have set in motion a **RE-Think or transformation** of the global energy system
4. Accelerating pace and expanding scope will bring **substantial benefits** from social, economic and environmental standpoints

(Unquote)

Renewable Energy Resources are playing a major and ever increasing role

Yet, renewable energy resources are not equal

- First, a **variety of sources** exist: geothermal, bioenergy, solar, wind, hydro, etc.
- Second, **projects** providing renewable energies may differ in terms of:
 - **Feasibility** (technical maturity)
 - **Viability** (commercial, social & environmental maturity)
- Third, energy resource estimates also carry some levels of **uncertainty**



Differentiation will help developers and users

This is the purpose of the UNFC-based Renewable Energy Classification:

- Resource estimates are differentiated in a consistent way related to their projects
- Differentiation enables optimal energy choices and facilitates project definition and selection

The UNFC-based Renewable Energy Classification will have 3 main uses:

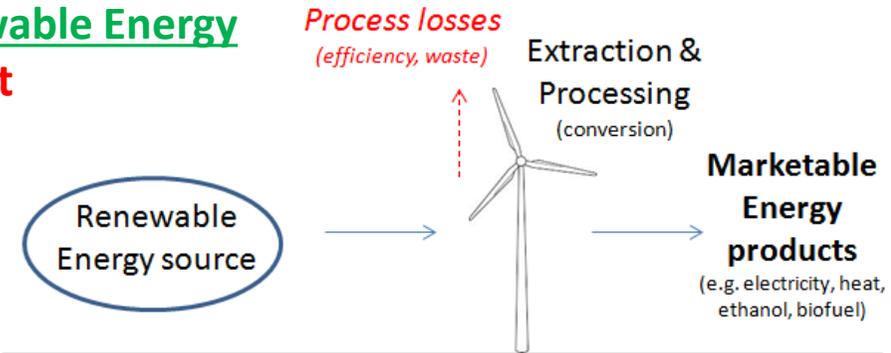
1. Assist internal planning and management of energies and projects
2. Help investors evaluate the potential value and risks of investments
3. Allow external reporting to regulators, stock exchanges or governments

The UNFC is a “project-based” classification

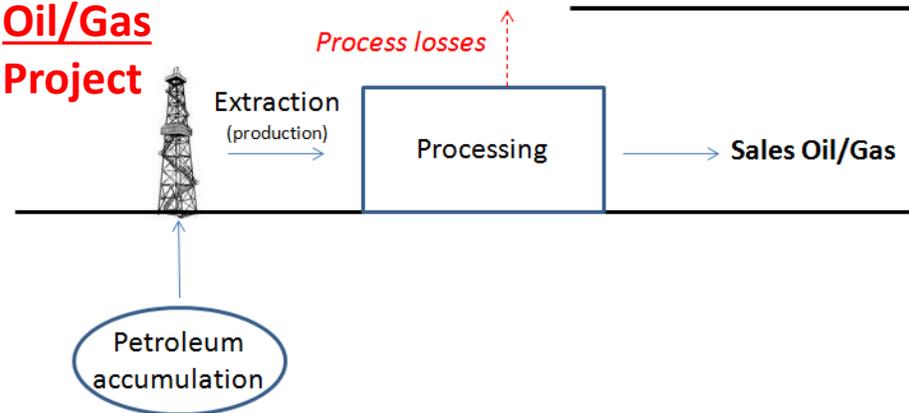
The **Project** is the link between the source and the sold product

The **Project** allows economics and decision on how to proceed

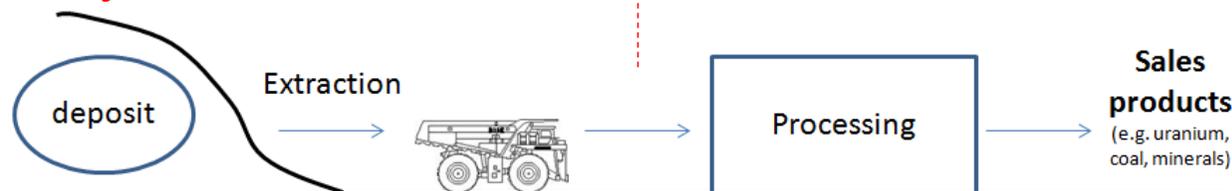
Renewable Energy Project



Oil/Gas Project



Uranium/Coal Project



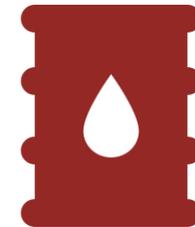
All energy resources are estimated based on a source coupled with technology and processing to create products

Sources

Technology

Processing

Products



The journey to a UNFC-based, global Renewable Energy Classification

- In 2012, UNECE called upon **EGRC** to “*develop ideas on how UNFC could apply to and integrate renewable energy by December 2013*”
- In mid-2013, EGRC established a **Work Group** to develop Specifications for application of UNFC to Renewable Energy Resources
- **The Work Group** developed **Generic Renewable Specifications** approved after public consultation and issued in 2016
- **5 Sub-Groups** (Geothermal, Bioenergy, Solar, Wind and Hydro) are now developing **Commodity-specific Specifications**
- **Geothermal** was published in 2016. **Bioenergy** will be in 2017. **Solar** is making good progress. **Wind and Hydro** have been initiated.
- By end 2020, a UNFC-based, a **global Renewable Energy Classification** will be available to all energy stakeholders for adoption and use

Six requirements for success

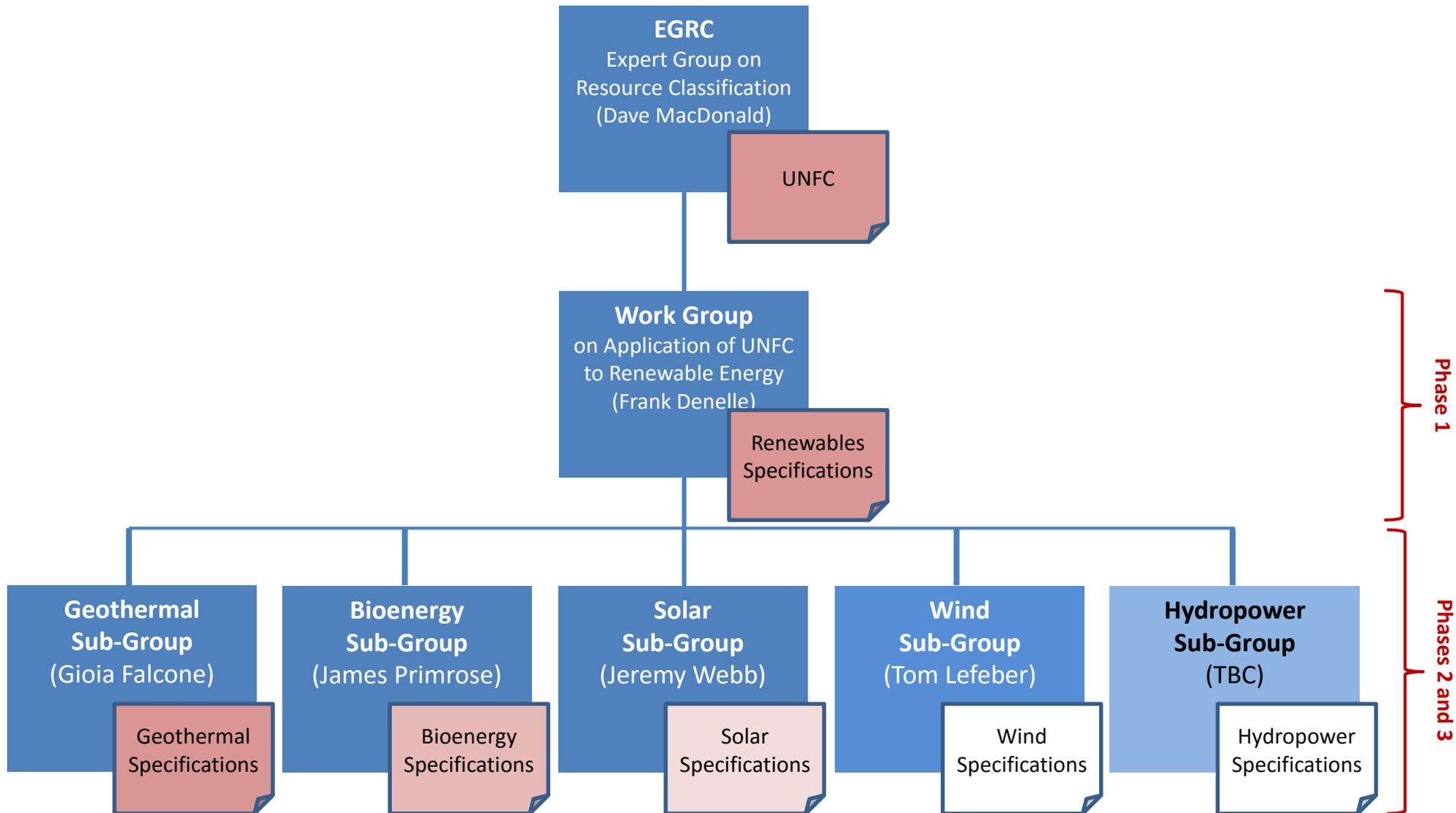
1. Specifications are UNFC-based and fully consistent with its Principles
2. Clear, well-structured text with sufficient details to be used as global standard
3. Case studies to illustrate the application and help check how the Specifications work
4. Access to accepted methods on how to quantify resources to be classified
5. Further guidelines on how to classify project-based resource estimates
6. Participation, support and endorsement by recognized global bodies (IHA, IGA, etc.)



Next steps on the REN Classification journey

1. Following Geothermal and Bioenergy, complete the Solar, Wind and Hydro Specifications. Publish as complete suite of UNFC-based Renewable Specifications (REN Classification)
2. Introduce in energy companies and apply to their resources / projects. Introduce to research institutions and governments and apply to assessments of resources and projects to realize these resources
3. Engage investors and other sources of finance in the discussion on the use of the REN Classification, including impact on RRR and R/P
4. Engage global industry organizations (IHA, IGA, etc.) as leading authorities to drive further development and maintenance of the REN Classification
5. Build a body of practice around its application as part of a wider harmonized energy evaluation and reporting system
6. Work on the development of harmonized energy resource monitoring and information systems
7. Engage stock exchanges and regulatory authorities like the SEC regarding the use of the REN Classification for external reporting

Renewable Energy Resource Classification Project Structure and Governance



Conclusions

- **The development of a UNFC-based classification for Renewable Energies is making good progress**
- **By end 2020, a complete suite of Specifications will be available supported by case studies and guidelines**
- **Three key benefits are expected:**
 1. Assist internal planning and management of energies and projects
 2. Help investors evaluate the potential value and risks of investments
 3. Allow external reporting to regulators, stock exchanges or governments
- **Success hinges on your support and engagement for adoption and usage**



What we need from you / how you can be engaged ...

- Candidates to join the Wind and Hydro Sub-Groups
- Global organizations to support the Wind and Solar Sub-Groups
- Real case studies to illustrate the application of the Specifications
- Ambassadors to promote our work and engage potential users
- Users to give us feedback to further improve the Specifications



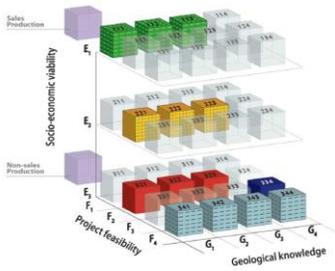
Contacts

If you have questions or comments, or wish to join the Task Force or one of the Working Groups, or help create the Wind or Hydro WGs, please contact:

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More information on UNECE Sustainable Energy website:

www.unece.org/energy/se/reserves.html



Thank you for
your attention!

Questions ?

