

# UNFC Application to Renewable Energy

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Co-Chair of EGRM Renewable Energy Working Group  
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25<sup>th</sup> April 2024



**RESOURCE MANAGEMENT WEEK**  
**2024**



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# Summary

- UNFC – The journey to renewable energy
- From finite to renewable energy resources
- Status of implementation – selected examples
  - Geothermal
  - Wind



# UNFC – The Journey to Renewable Energy

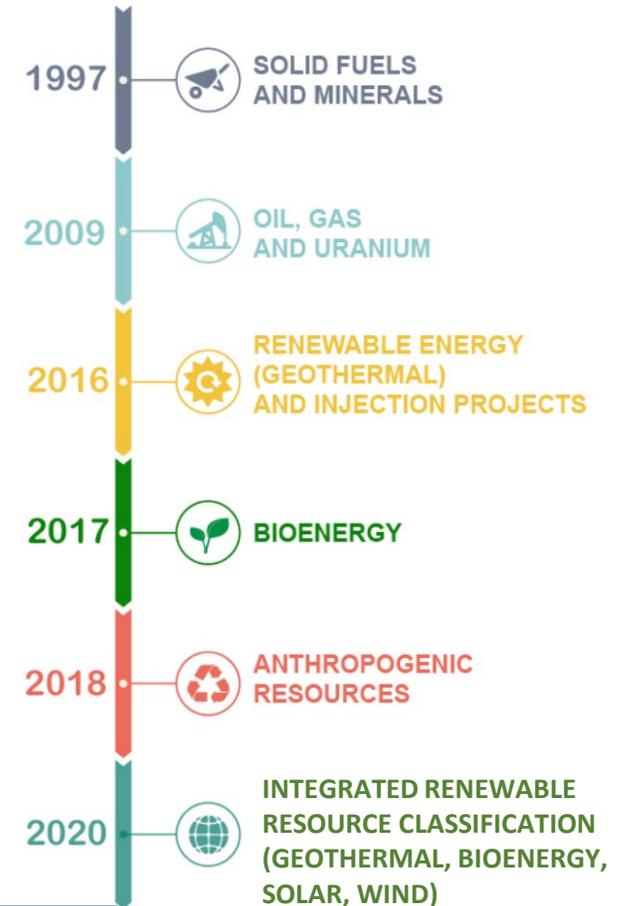
**UNFC**  
a global classification system  
for renewable energy resources



Key role of Renewable Energy towards a sustainable future has highlighted a need to harmonize the way in which its potential is reported.

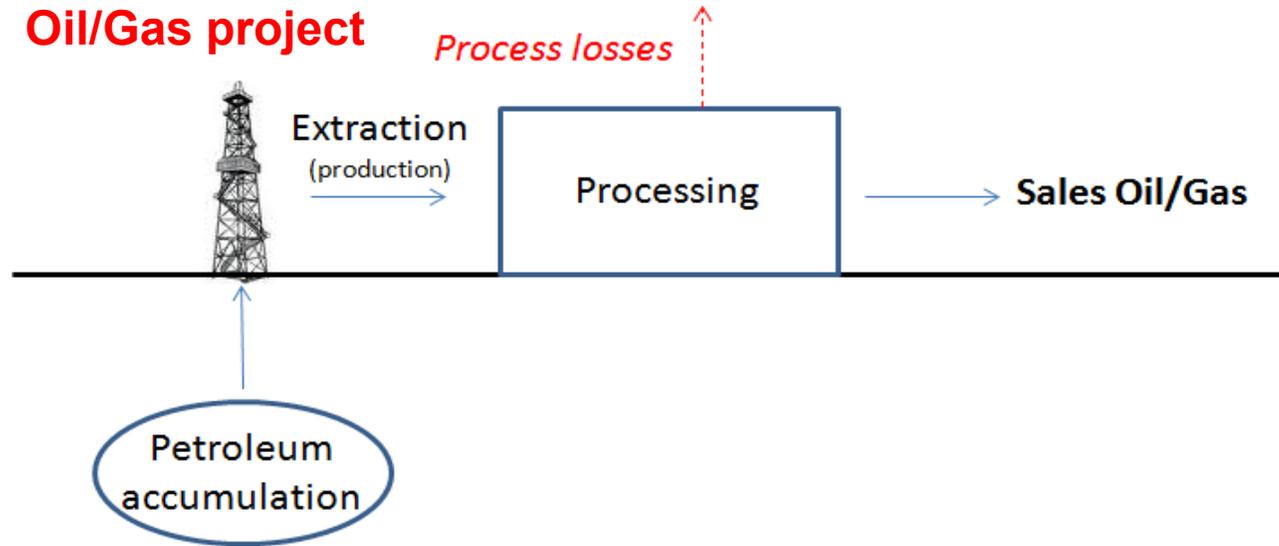
Investors, regulators, governments and consumers need a common comparison framework for both renewable and non-renewable energy resources to assess energy sustainability scenarios at project, company, country, regional or global levels.

Ongoing updates. Geothermal specifications update completed and operational since **25-Oct-22!**



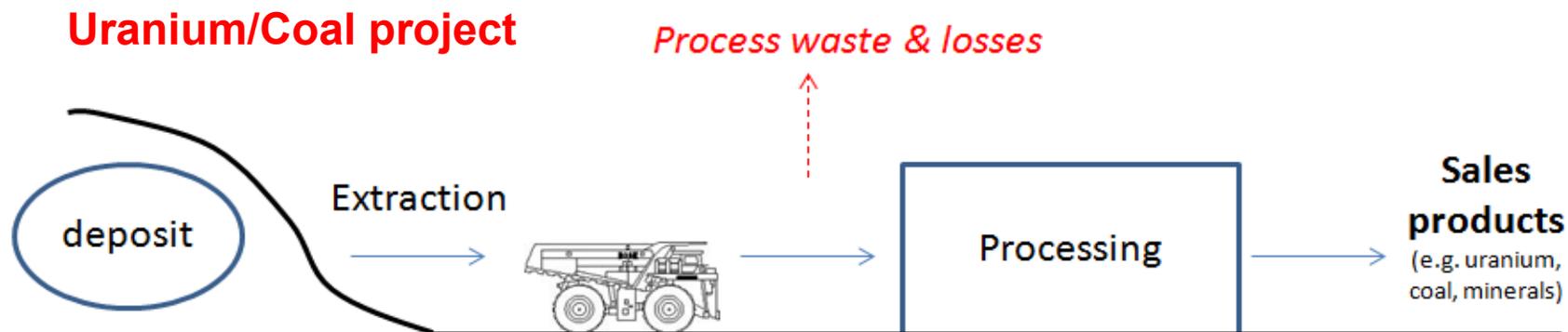


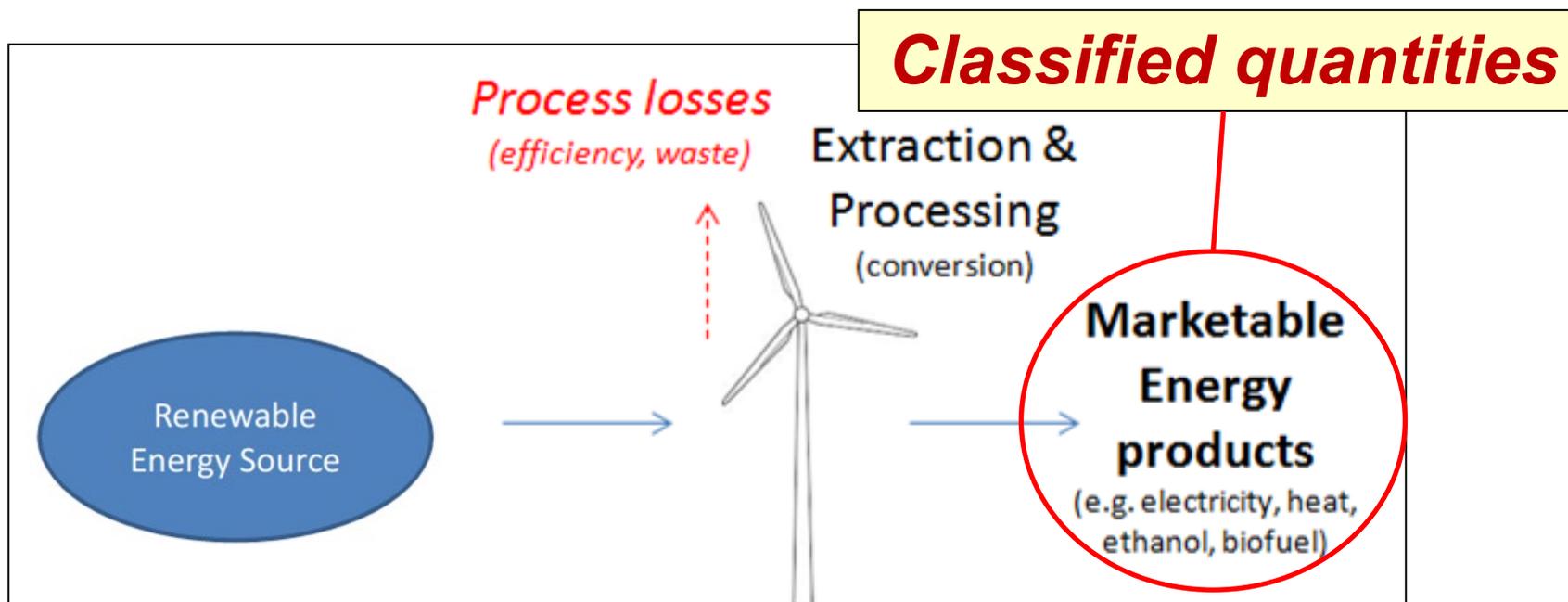
### Oil/Gas project



A **project** is the level at which a decision is made on whether or not to proceed (i.e. spend money or not.)

### Uranium/Coal project



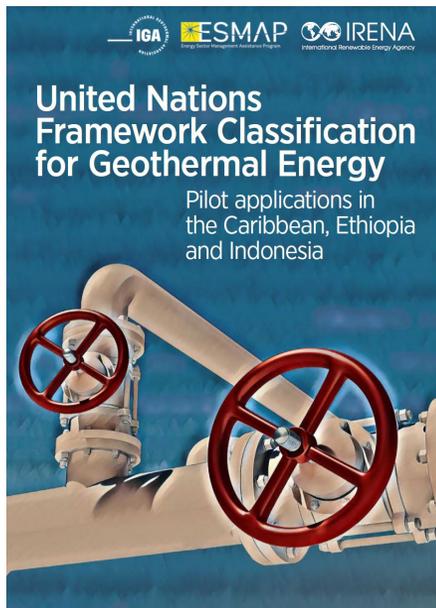


A **Project** is the link between the Renewable Energy Source and marketable quantities of Energy Products.

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

# UNFC – Geothermal Implementation

Examples around the globe



June 2021  
(Based on UNFC-2009 and 2016 geothermal specifications)

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**Queensland, Australia, is first jurisdiction to legislate application of the United Nations Framework Classification for Resources to Geothermal energy**

Climate Change > Sustainable Energy > UNFC and Sustainable Resource Management >

07 September 2022

The application of the UN's flagship framework for sustainable resource classification (UNFC) reached a new milestone with the decision by Queensland, Australia, to legislate application of UNFC to geothermal energy.

Queensland's Geothermal Energy Regulation 2022 includes the UNFC Geothermal Specifications for classifying and reporting geothermal energy resources. It was approved by the Governor in Council in Brisbane and came into effect on 1 September 2022.

Consejo de Ministros de Energía del SICA destaca avances y logros en proyectos e iniciativas para la implementación de la Transición Energética en la Región

Viernes, 30 de Junio de 2023  
Publicado por: Secretaria General del Sistema de la Integración Centroamericana  
Fuente: SG-SICA

SICA Sistema de la Integración Centroamericana

SICA's Energy Ministers Council instructs application of UNFC



UNFC applied for geothermal inventory at Waikato Region, New Zealand



Pohutu geyser in Te Whakarewarewa, New Zealand (source: denisbin / flickr, Creative Commons)



Carlo Carliaga  
14 Dec 2023

Jacobs has published a comprehensive report applying the UNFC standards for an inventory of geothermal projects in the Waikato Region in New Zealand.



**10th African Rift Geothermal Conference (ARGeo-C10)**

**"Accelerating Development of Geothermal Resources in Africa for Just Energy Transition, Carbon Markets and Net Zero Emissions"**

11 to 17 November 2024,  
Julius Nyerere International Convention Centre,  
Dar es Salaam, Tanzania

Planned 2-day pre-conference UNFC course by Jacobs

# UNFC – Wind Implementation

## UK Case Study

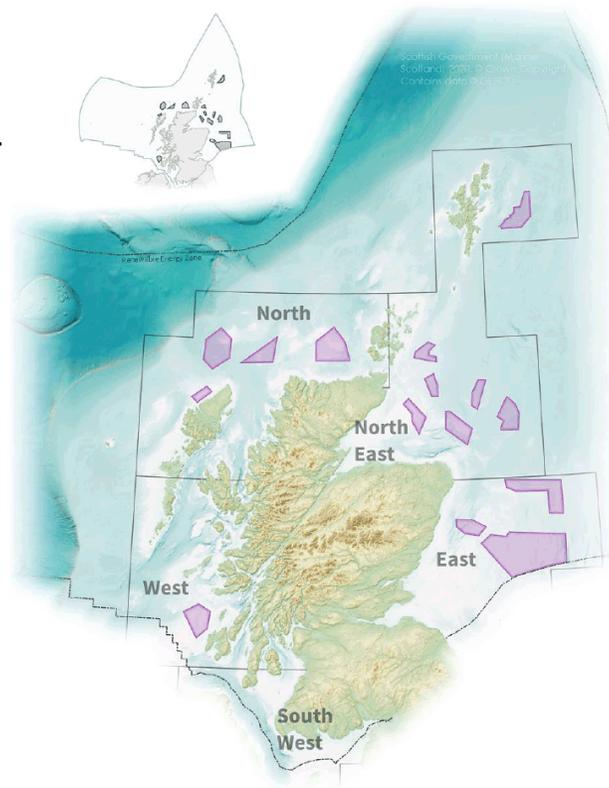


United Nations  
**Economic and Social Council**  
 ECE/ENERGY/GE.3/2022/11  
 Distr.: General  
 22 April 2022  
 English only

**Economic Commission for Europe**  
 Committee on Sustainable Energy  
 Thirteenth session  
 Geneva, 25-29 April 2022  
 Item 9 (c) of the provisional agenda  
**Development, maintenance and implementation of the United Nations Framework Classification for Resources: Renewable energy resources**

### Application of the United Nations Framework Classification for Resources to Wind Energy Resources: National Aggregation Case Studies

Prepared by members of the Wind Sub-group and the Renewable Energy Working Group of the Expert Group on Resource Management



Summary of quantification in terms of development status

Development Status	Low (PJ)	Mid (PJ)	High (PJ)	% of total <sup>a</sup> (using mid estimate)
	G1	G1+G2	G1+G2+G3	
Operational	169	217	271	0.1%
Under construction	192	286	394	0.1%
Consent granted	635	966	1,371	0.5%
Early concept	2,588	4,784	7,045	2.5%
Undeveloped	141,215	184,769	229,643	96.7%
				100.0%

<sup>a</sup> Rounding error.

Acknowledgements:

- ✓ EGRM Renewable Energy Working Group
- ✓ EGRM Geothermal, Bioenergy, Solar and Wind Sub-Groups
- ✓ EGRM Technical Advisory Group
- ✓ International Geothermal Association
- ✓ Expert volunteers and organisations facilitating the implementation of UNFC for Renewable Energy Resources

THE VIEWS EXPRESSED ARE THOSE OF THE PRESENTER AND DO NOT NECESSARILY REFLECT THE VIEWS OF THE UNITED NATIONS.

# Thank you!

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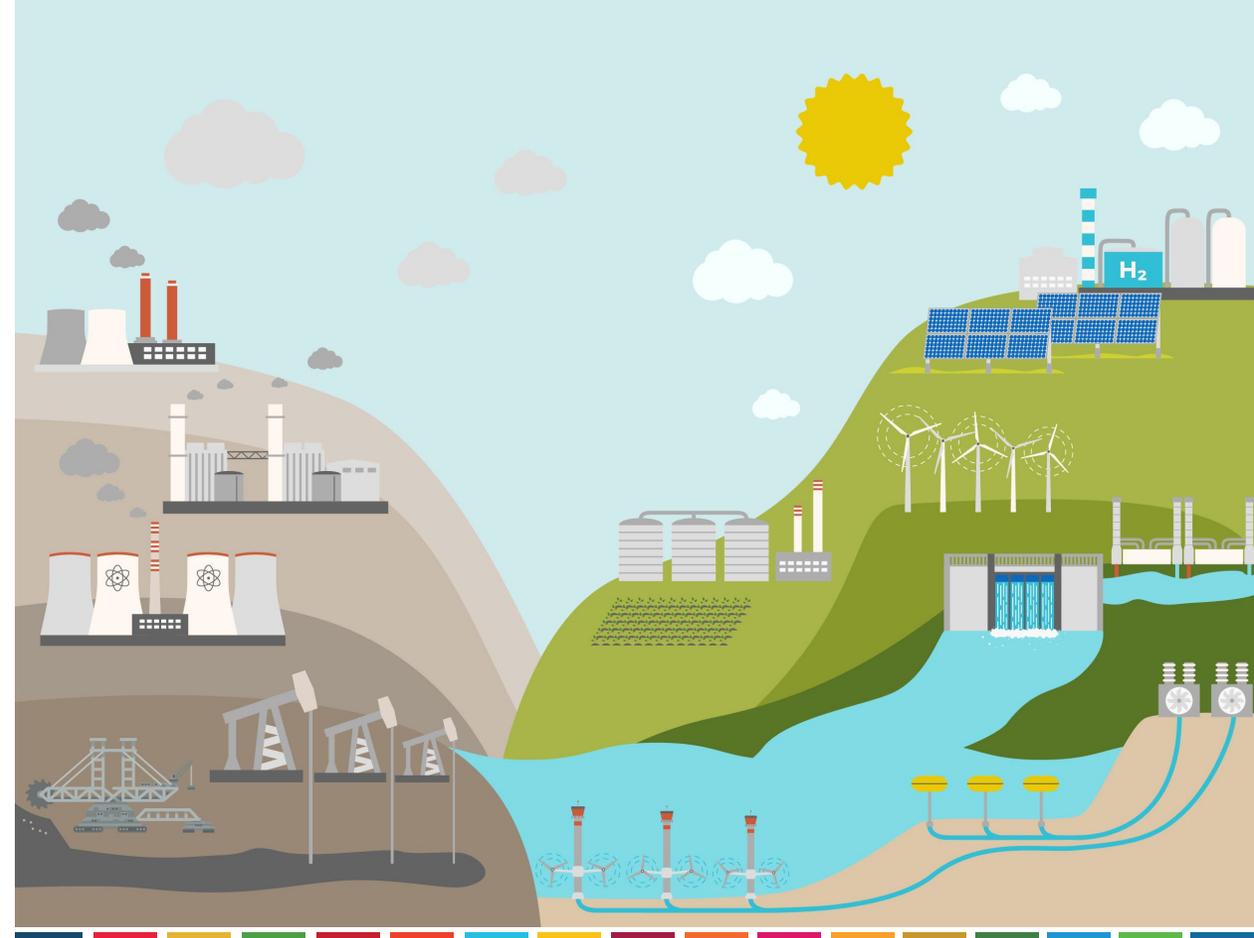
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Date 25 | 04 | 2024



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