Geothermal Reporting Codes for Public Reporting

A need for an International Consensus

Lilja Tryggvadóttir

Mannvit

Pisa, June 6th 2013

Supported by INTELLIGENT ENERGY EUROPE

Introduction

- Standardized classifications and terminology
- UNFC-2009
- No accepted global standard for geothermal
- Specific European Geothermal Reporting Code for Public Reporting - review
- International consensus

GEOELEC

Supported by INTELLIGENT ENERGY EUROPE

What is a „Geothermal Reporting code for Public Reporting“?

- Template for Public Reporting
- Standardised approach to data presentation
- Two existing by AGEA and CanGEA

Supported by INTELLIGENT ENERGY EUROPE

Public Reporting

- Includes requirements by each stock exchange
- Can be different between countries
- Difficult to standardise internationally
- Difficult to standardise in Europe

GEO ELEC

Supported by INTELLIGENT ENERGY EUROPE

Present application of existing codes

- Around 21-22 known code compliant reports
- No endorsement by a securities exchange
- Few listed companies in Europe
- Utilisation has built up trust and growth

GEO-ELEC

Supported by INTELLIGENT ENERGY EUROPE

Existing Geothermal Reporting Code

Objectives

Standardized approach and data presentation
Attract equity capital (international players)
Applicable to all geothermal plays

TRANSPARENCY - clear unambiguos report
MATERIALITY - relevant information
COMPETENCE - Code of Ethics

GEO ELEC
Supported by INTELLIGENT ENERGY EUROPE

Existing Geothermal Reporting Code

Key Definitions

- Classification
  - levels of geological knowledge and confidence
- Modifying Factors
  - likelihood of commercial delivery
- 'Geothermal Reserves'
  - commercially recoverable now,
- 'Geothermal Resources'
  - require further work to be 'Geothermal Reserves'.

GEO ELEC

Supported by INTELLIGENT ENERGY EUROPE

Existing Geothermal Reporting Code

Utilisation

- Covers all forms of
  - Geothermal energy and
  - utilisation possibilities
- Covers the way assessments are
  - classified and
  - publicly reported
- Not the way assessments are made

GEO ELEC

Supported by INTELLIGENT ENERGY EUROPE

Why international standardisation?

- Comparability for international investors
- Simplify public reporting
- Support trust for geothermal industry
- Small market

GEOELEC

Supported by INTELLIGENT ENERGY EUROPE

What can be standardized

- Reporting Template
- Data presentation
- Classifications
- Definition of terms
- Required information for project assessment
- Requirements for qualified/competent person

GEO ELEC

Supported by INTELLIGENT ENERGY EUROPE

Common basis to compare projects

- Focus on standardized approach and data presentation
  - Best done based on same format
  - Using same classifications
  - Same definitions and terminology
  - > Same Geothermal Reporting Consensus

GEOELEC

Supported by INTELLIGENT ENERGY EUROPE

REQUIREMENTS IN EUROPE

- Comply with other reporting codes
- Applicable to all projects
- Satisfy information needs of stakeholders
- Allow project developers to keep advantage

Existing Geothermal Reporting Codes fulfil this.

GEOELEC

Supported by INTELLIGENT ENERGY EUROPE

PROS & CONS OF APPLICATION OF EXISTING CODES IN EUROPE

PROS	CONS
Less work invested	No regulation nor supervision
Existing codes based on international reporting template	Non compliant reports quoting the code could potentially weaken it
Fewer codes gives better comparison basis	

GEO-ELEC

Supported by INTELLIGENT ENERGY EUROPE

PROS & CONS OF SPECIFIC EUROPEAN CODE

PROS	CONS
Regulated and supervised	Cost and work required
Leverage in international Code discussion	Handful of companies listed – few users
	No international umbrella association and three independent codes gives less comparison possibilities between markets.

GEO-ELEC

Supported by INTELLIGENT ENERGY EUROPE

Conclusion

- Need for standardised investor environment
- Use Existing Framework as basis for Europe
- Continue towards international consensus

Supported by INTELLIGENT ENERGY EUROPE

Suggestions

- Establish a working group for global discussion
  - Include representatives of European end users
  - Aim at European Consensus
  - Suggest adaption based on existing framework
  - International discussion groups to raise awareness

GEO ELEC

Supported by INTELLIGENT ENERGY EUROPE

Suggestions

- UNFC-2009 classification scheme adaption
  - Contact Expert Group on Resource Classification
  - Compare renewable and non-renewable energies

GEO ELEC

Supported by INTELLIGENT ENERGY EUROPE

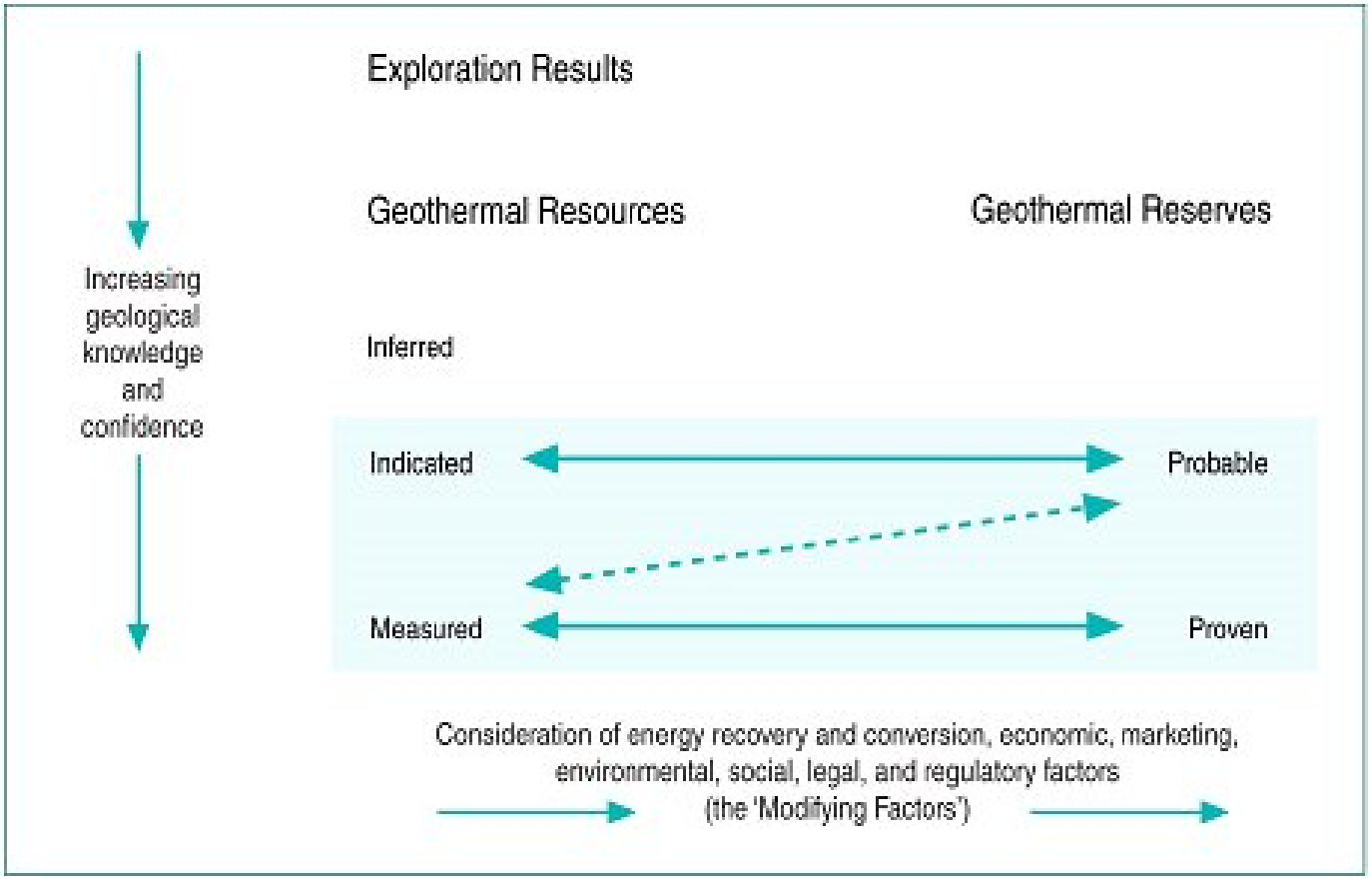
Thank You!

VISIT GEOELEC.EU

GEOELEC

Supported by INTELLIGENT ENERGY EUROPE

Existing Geothermal Reporting Code Key Definitions



GEO ELEC

Supported by INTELLIGENT ENERGY EUROPE

CRIRSCO reporting codes

- Reporting standards from the oil industry
- CRIRSCO international umbrella for:
  - JORC in Australia
  - CIM in Canada
  - PERC in Europe

PERC, JORC & CIM based on same reporting standards.

GEO ELEC

Supported by INTELLIGENT ENERGY EUROPE