

# How do nuclear scientists and engineers talk internally among themselves about the Fukushima energy crisis?

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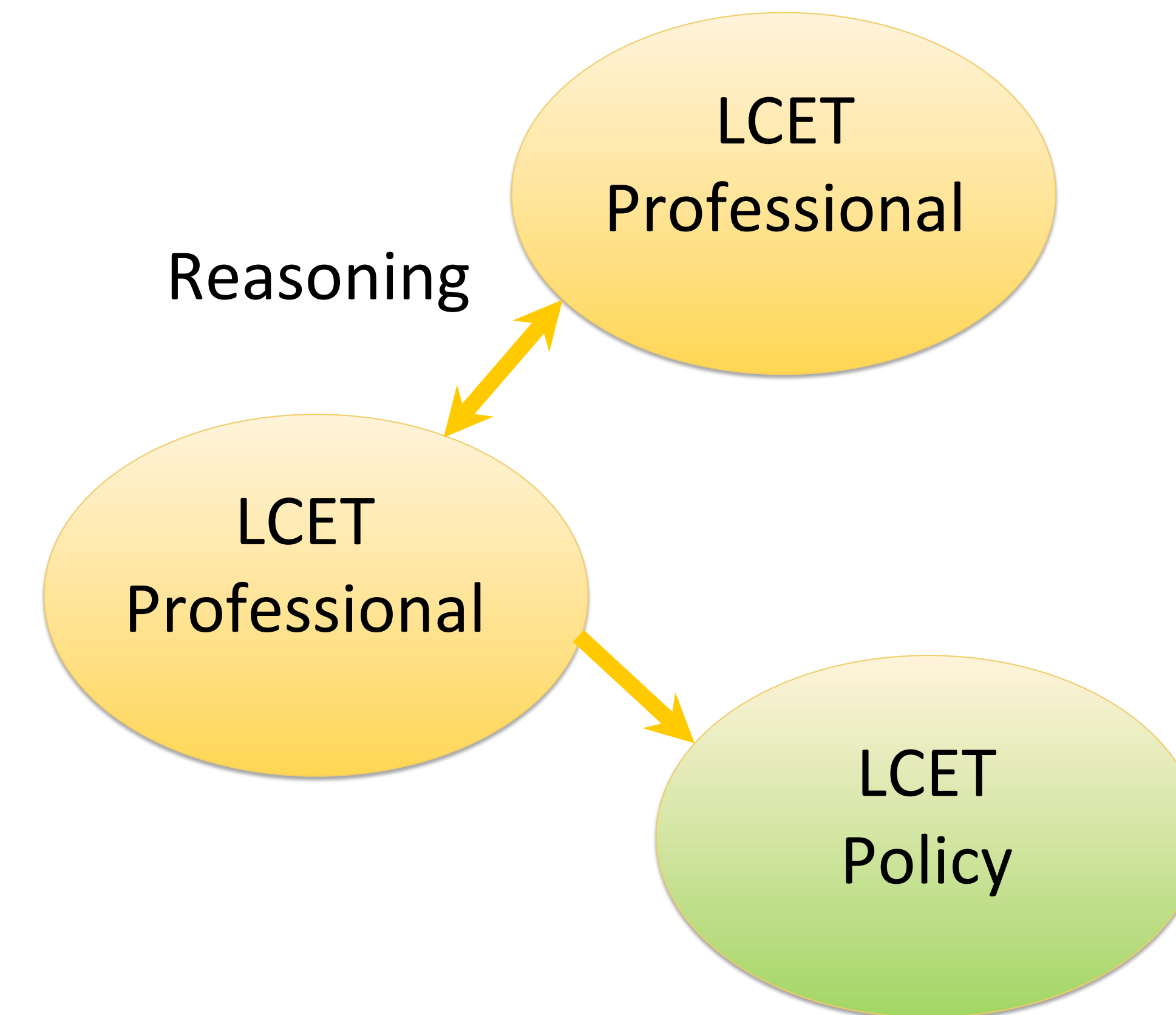
## Introduction

- Controversies about the Fukushima accident the connection between **science**, **society**, and **policy**
- **Low-Carbon Energy Technologies (LCETs)** hold potential to address global energy and change energy policy
- Understanding the **forms of reasoning** used by scientists and engineers in talk among themselves can enable productive avenues for developing **low-carbon energy policy**



## Forms of Reasoning

- Reasoning is the act of constructing a logical argument with a claim and support
- Technical reasoning includes forms of argument that produce legitimate scientific and engineering knowledge
- Prudential reasoning involves forms of argument that produce judgments based on value
- Previous research indicates that scientists and engineers use technical reasoning in communication among themselves and prudential reasoning in communication with the public
- **Our hypothesis is that LCETs also use prudential reasoning among themselves**

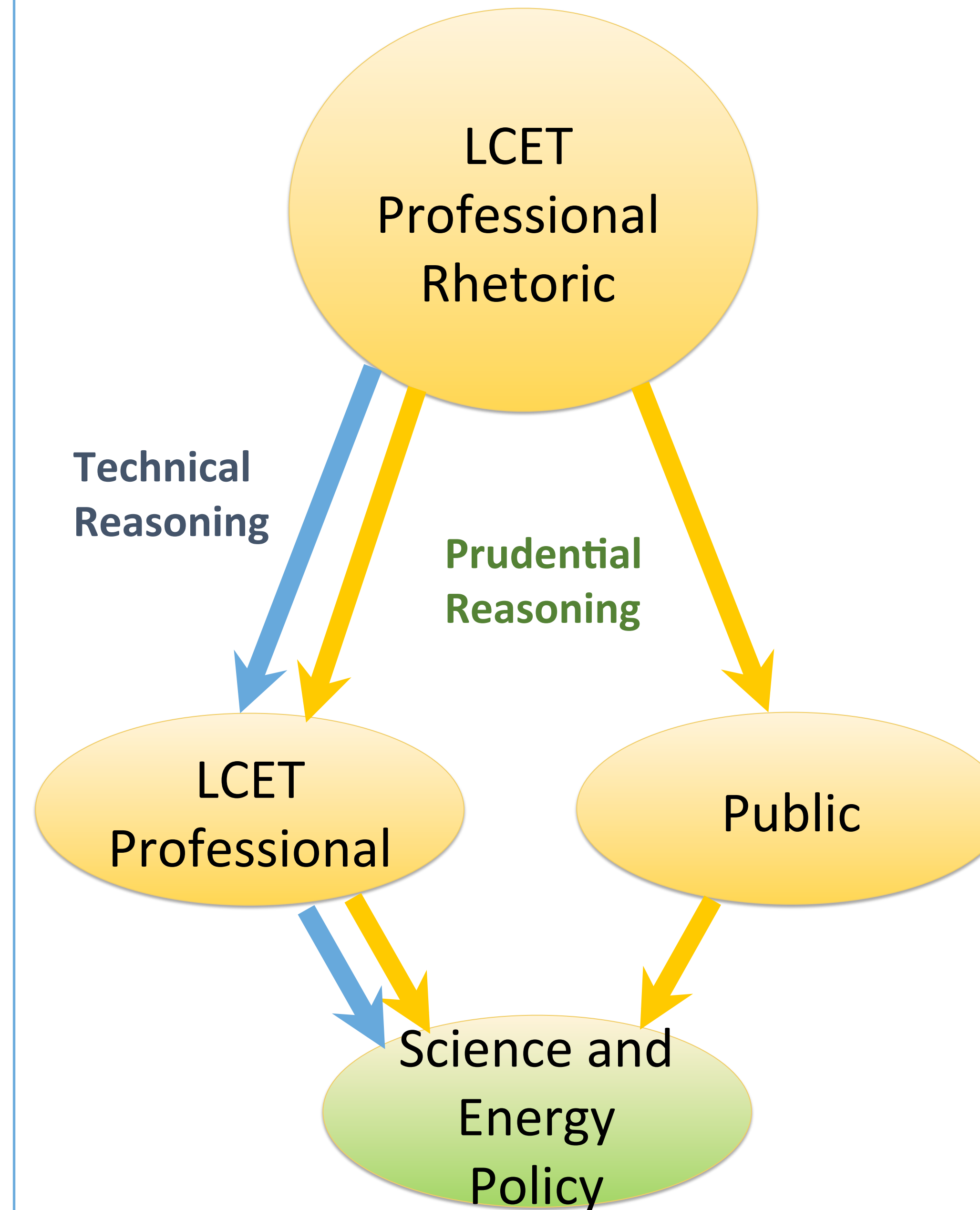


## Who are LCET Professionals?

- They are **Interdisciplinary** scientists and engineers across **multiple sectors** engaged in **basic and applied** research, development, and subsequent deployment of low-carbon energy technologies
- They all have **scientific training** and may be working in academic, corporate, or industry settings
- My project focuses on nuclear scientists and engineers

## Research Questions

- **RQ1:** What forms of reasoning do nuclear professionals use when communicating among themselves?
- **RQ2:** If such forms of reasoning are present, how do they inform and constrain nuclear safety policies in the wake of the Fukushima disaster?
- **RQ3:** What role does Fukushima play in future policy discussions surrounding nuclear safety?



## Research Methods

- Rhetorical: used to analyze the internal expert-to-expert rhetoric of nuclear energy scientists and engineers to examine what sociopolitical aspects are important to scientists and engineers
- Qualitative: used to collect the data, which is based on participant observation and interviews with key scientists and engineers at an American nuclear science conference



## Potential Findings

- Description of the ways scientists are talking about Fukushima is valuable because it plays a heavy role in the discussion of future nuclear energy policies
- There is potential to contribute to our understanding of the role that scientists and engineers have in the development of energy policy

## Current and Future Work

- The larger sample includes **nuclear** and **wind** professionals
- Observation of energy professionals across different energy resources can inform how **scientists influence policy** through their forms of reasoning



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