

C2

Assessment and Socio-economic Effects Analysis of Hydrogen Energy Technology

This research provides optimized pathway towards hydrogen economy by

- Addressing specific action plan through technological, economical, environmental analysis
- Developing competitiveness and commercialization strategy of technology developed
- Conducting cost analysis based on current and future cost

Goal

Development of the optimal pathway towards hydrogen economy and provides specific action plan

- Environmental impact analysis of hydrogen technologies
 - Impact analysis of hydrogen technology in national energy system
 - Extending analysis scope and enforcing analysis model
 - Hydrogen technology impact analysis and assessment by scenarios
 - Gathering production/storage/utilization technology data
- Competitiveness analysis
 - Competitiveness analysis of technologies
 - Analysis of commercialization strategy via value-chain technique
- Economical analysis
 - Cost analysis and estimation of future cost

Objective

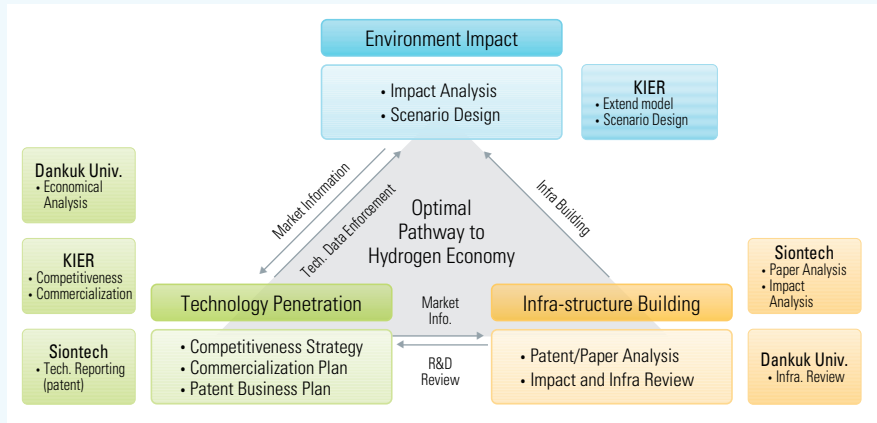
- 1st year
 - Enforcing the impact analysis model
 - Building framework for economical analysis of hydrogen technologies
 - Developing a prototype for commercialization strategy plan based on patents
- 2nd year
 - Extending analysis scope
 - Developing competitiveness strategy for hydrogen technology
 - Providing technology strategy reports using the prototype
- 3rd year
 - Impact analysis of hydrogen technology by scenario
 - Analysis of competitiveness strategy for hydrogen technology
 - Developing commercialization strategy for hydrogen technology
- 4th year
 - Conducting optimal pathway towards hydrogen economy and specific action plan
 - Providing commercialization strategy
 - Providing product-based roadmap



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Strategy



Outcomes & benefits

- Development of successful strategy for hydrogen economy
- Support of commercialization strategy
- Enhancing the possibility of commercialization
- Providing further directions via. information analysis and forecasting
- Providing analysis framework for further research
- Support framework how to build infrastructure for hydrogen economy

Publications (2nd stage)

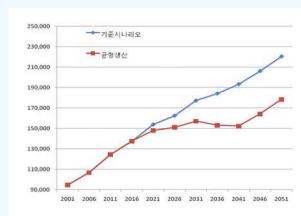
Patent		Theses							Proceedings		
		domestic			foreign			total sum	domestic	foreign	sum
domestic	foreign	SCI	Non SCI	sum	SCI	Non SCI	sum				
			7	7	1		1	8		1	1

■ Publications

1. Jongwook Kim, Bongjin Kim, Kyeonseok Kang, Seongkon Lee, "The Competitiveness of Korea as a developer of hydrogen energy technology" : The AHP approach, Energy Policy, 2008
2. Jongwook Kim, Seokhun Kang, Sangjin Choi, "Global Energy Overview and Hydrogen Energy Research", The Korean Hydrogen & New Energy Society, 2007



Competitiveness of Korea



CO₂ Emissions in Transportation Sector