

Visions for a Low-Carbon Society through Sustainable Development

Discussion

How to Achieve LCS: Low-Carbon Options

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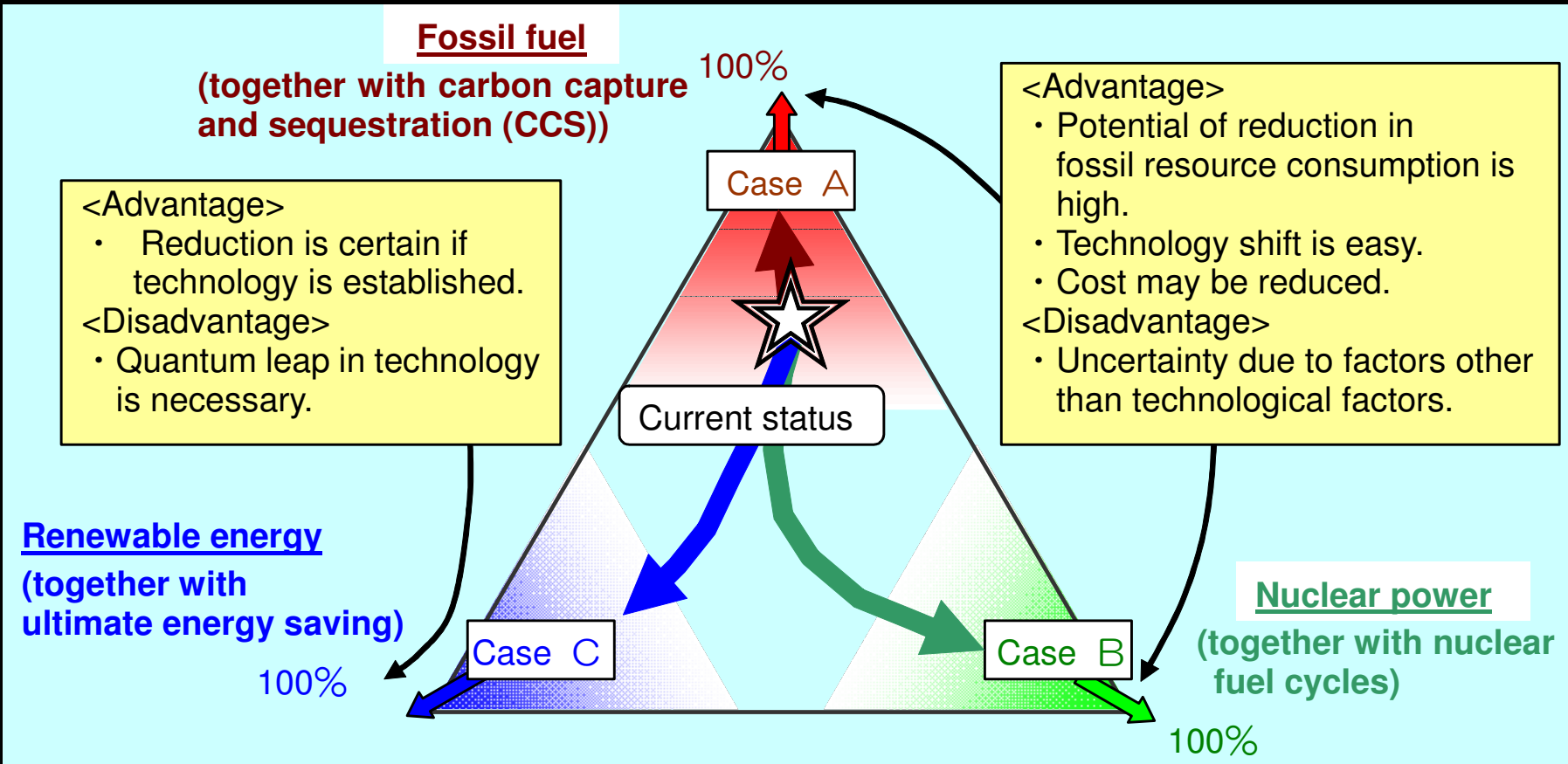
**National Institute of Advanced Industrial Science and
Technology (AIST)**

Energy Technology Vision 2100

*Agency for Natural Resources and Energy
Ministry of Economy, Trade and Industry*

- **Purpose**
 - **To establish strategic energy R&D plan by**
 - **identifying technologies and developing technology portfolio to prepare for resource and environmental constraints**
 - **considering optimum R&D resource allocation in METI**
- **Timeframe:**
 - **Vision and Technology roadmap: - 2100**
 - **Benchmarking years: 2030 and 2050**

Three Extreme Cases and Possible Pathway to Achieve the Goal



- **Cases A & C assume least dependency on energy saving**

How to Achieve LCS: Low Carbon Options Implications from *ETV 2100*

An approach to LCS from Energy Policy

- **Assumption on CO₂/GDP improvement:**
 - 1/3 in 2050
 - Less than 1/10 in 2100
- **Key discussions:**
 - Nuclear and CCS, especially as a mid-term option, would increase the flexibility of energy supply and demand structure with moderate cost.
 - CCS would contribute to deep reduction and hydrogen economy but might not be a truly sustainable option from the viewpoint of resource depletion.
 - Energy efficiency is the key!

How to Achieve LCS: Low Carbon Options

- **Approaches**
 - **Technology**
 - **R&D, Market introduction**
 - **Policy instruments**
 - **Economic incentives, etc.**
- **Players**
 - **Citizens,**
 - **Industries,**
 - **Governments, ...**

Thank you!

Tentative English translation of
“Energy Technology Vision 2100” is
available from:

<http://www.iae.or.jp/2100.html>