Comments from Technology Policy

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Comments from Technology Policy (1)

1. How to define the "effectiveness" of the R&D programs for GHG emission reduction ?

= For the case of purely basic research, the amount of creation of "new" knowledge may be observed.

= For the case of application-inspired basic research/applied research, the (possible) contribution to industrial developments may be observed.

= For the case of R&D for climate change, the future mitigation on the global warming effect shall be observed, but how ? (The size of the R&D program often becomes too smaller than the size of its "optimum", if not-sufficiently testified.)

Comments from Technology Policy (2)

2. How to build the "portfolio" of the R&D programs combining "incremental" technologies and "disruptive" technologies ?

= [Case of Photovoltaic Cell]

Si-crystalline, Si-amorphous, CIGS, Ⅲ-V compound, dye-sensitized, organic thin film, and quantum-dot, etc., ……

>> Plausibility of success, magnitude of energy generated, possible cost reduction, etc., shall be examined.

= [Case of Superconductor Power Transmission]

>> Socio-economic system shall be re-structured if super-conductor technology be introduced.

= USDOD seems to spend 80% for incremental R&D and 20% for disruptive (DARPA).

Comments from Technology Policy (3)

3. How can we be creative enough for avoiding "technology lock-in" problem, without unnecessary confusion ?

= For the case of automobile, the dominant design of the product (and related infrastructure) has been (undoubtedly) defined (4 wheels, 4~5 person, handle/brake/accelerator).

= For the mass production of iron & steel, steel mill is known as the best method, not only from the purely technology perspectives but also from the industrial/economic reality.

= This may relate to the question: what decides the optimal "life" of today's dominant technologies ?

("Life" is too short in case of semiconductor, PC and IT.)