



# 「革新的エネルギー・環境戦略」の概要 と国内外の反応

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# Outline of 「Innovative Strategy for Energy and the Environment」 and Responses to the Strategy

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# 1. 革新的エネルギー・環境戦略

(2012年9月14日、エネルギー環境会議 決定)

## 3本の柱

### 1. 1 原発に依存しない社会の一日も早い実現: 第1の柱

(1) 3つの原則 ◀ 2030年代に年代に原発稼働ゼロを目標

- 1) 40年運転制限を厳格に適用
- 2) 原子力規制委員会の安全確認を得たもののみ、再稼働
- 3) 原発の新設・増は行わない

(2) 5つの政策

1) 核燃料サイクル政策

- ・引き続き従来の方針に従い再処理事業に取り組む
- ・核不拡散と原子力の平和利用という責務を果たす

当面以下を先行

- －直接処分の研究に着手
- －「もんじゅ」は、廃棄物の減容の研究等、年限を区切った研究計画を策定し、成果を確認の上、研究を終了
- －バックエンド事業については、民間任せにせず、国も責任を持つ
- －国が関連自治体や電力消費地域と協議する場を設置し、使用済燃料の直接処分のあり方、中間貯蔵の体制・手段の問題、最終処分場の確保に向けた取組など、結論を見出していく作業に直ちに着手

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# 1. Innovative Strategy for Energy and the Environment

(Decision of the Energy and Environment Council on September 14<sup>th</sup>, 2012)

## The Strategy upholds the following three pillars

1.1 Realization of a society not dependent on nuclear power in the earliest possible future : First Pillar

(1) Three guiding principles ◀ Aim at zero operation of nuclear power plants in the 2030's

- 1) To strictly apply the stipulated rules regarding forty-year limitation of the operation
- 2) To restart the operation of nuclear power plants once the Nuclear Regulation Authority gives safety assurance
- 3) Not to plan new or additional construction of an NPP

(2) Five policies

1) The nuclear fuel cycle policy

To engage in reprocessing projects continuously in accordance with present nuclear fuel cycle policy

To fulfill our responsibility regarding nuclear non-proliferation and peaceful uses of nuclear energy

The following steps should be given priorities for the time being:

- Research on direct disposal is to be launched
- Regarding Prototype FBR Monju, a research plan for a certain period or time for reduction of the amount and toxic level of radioactive waste and other related purposes will be developed, implemented, and, after confirming the outcomes, completed
- The Government will take responsibility for the project on the backend, not simply relying on efforts made by the private sector
- The Government will establish a forum for consultation with related local municipalities and/or areas of electricity consumption and will immediately embark on projects to find solutions for issues regarding direct disposal of spent fuels, the applicable institutions and means of intermediate storage, and the methods of identifying sites for final disposal

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# 1. 革新的エネルギー・環境戦略(続き)

## (2) 5つの政策

- 2) 人材や技術の維持・強化
- 3) 国際社会との連携
  - －政策の見直しに当たっては、国際機関や諸外国と緊密に協議し、連携して進める
- 4) 立地地域対策の強化
- 5) 原子力事業体制と原子力損害賠償制度

## (3) 原発に依存しない社会への道筋の検証

- －グリーンエネルギー拡大の状況、国民生活・経済活動に与える影響、国際的エネルギー情勢等について、検証し、不断に見直す

## 1.2 グリーンエネルギー革命の実現: 第2の柱

2030年代に年代に原発稼働ゼロを可能とするよう、あらゆる政策資源を投入

### (1) 節電・省エネルギーの推進

### (2) 再生可能エネルギーの開発

- －1100億kWh(2010年) → 3000億kWh(2030年)(約3倍、水力を除くと約8倍)
- －グリーン政策大綱の策定(2012年末)

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# 1. Innovative Strategy for Energy and the Environment (cont.)

## (2) Five policies (continued)

- 2) Maintaining and strengthening human resources and technology
- 3) Cooperation with the international community
  - Re-examination of its policy to realize a society not dependent on nuclear power will be made through close consultation and collaboration with international organizations and other countries
- 4) Strengthening measures for local areas with nuclear power facilities
- 5) Systems of nuclear power projects and the liability system for nuclear related damages

## (3) Review of the path towards a society not dependent on nuclear power

- The Government should carefully review such factors as the state of the expansion of green energy, the impact on people's lives and economic activities, the international situation regarding energy, and should constantly re-examine its nuclear policies

## 1.2 Realization of Green Energy Revolution : Second Pillar : Second Pillar

The Government will mobilize all possible policy resources to such a level as to even enable zero operation of nuclear power plants in the 2030's.

### (1) Implementation of electricity saving and energy saving

### (2) Development of renewable energy

- 110 billion kWh in 2010 → 300 billion kWh by 2030 (three times that of 2010, eight times that of 2010 if hydroelectric power is excluded)
- Formulation of Framework for "Green Development Policy" by around the end of 2012

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# 1. 革新的エネルギー・環境戦略(続き)

## 1.3 エネルギー安定供給の確保のために: 第3の柱

- (1) 火力発電の高度利用
  - 当面は火力発電の重要性が高まる
  - 環境技術を使って国際貢献や輸出
- (2) コージェネなど熱の高度利用
- (3) 次世代エネルギー関連技術
- (4) 安定的かつ安価な化石燃料等の確保及び供給

## 1.4 電力システム改革の断行

三本柱を実現するため、以下を実施

- 電力市場の独占を解き、競争を促進及び発送電を分離
- 分散ネットワーク型システムを確立し、グリーンエネルギーを拡大しつつ低廉で安定的な電力供給を実現
- 「電力システム改革戦略」を策定(2012年末)

## 1.5 地球温暖化対策の着実な実施

- 2030年時点の温室効果ガス排出量は、1990年比で2割削減を目指す
- 「地球温暖化対策の計画」を策定(2012年末)

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# 1. Innovative Strategy for Energy and the Environment (cont.)

## 1.3 For Ensuring Stable Supply of Energy : Third Pillar

- (1) Advanced use of thermal power generation
  - Thermal power generation will become increasingly important at least for the immediate future
  - International contributions and exports of advanced environmental technology for thermal power generation
- (2) Intensive use of heat, including cogeneration
- (3) Technologies related to the next generation energy sources
- (4) Secure stable and inexpensive supply of fossil fuels

## 1.4 Bold Implementation of Reform of Electricity Power Systems

In order to realize the three pillars, the following items are implemented

- Elimination of monopolies and promote competition in the electricity market and separation of generation from transmission and distribution
- Establishment of a network-type distributed energy system, expansion of the use of green energy, and realization of an inexpensive and stable electricity supply
- Formulation of “the Strategy for Reform of Electricity Power System” by around the end of 2012

## 1.5 Steady Implementation of Global Warming Countermeasures

- Japan aims to reduce about 20% of green house gas emissions in 2030 compared to 1990
- Formulation of “Global Warming Action Plan” by the end of 2012

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## 2. 国内外の反応

### 2. 1脱原発(2030年代原発ゼロ)に対する反応

- (1) 原発ゼロ達成の具体策が示されていない
  - ・再生可能エネルギーに過度に期待すべきでない。
- (2) 国内産業界への影響が大きく、国力の低下を招くことから、脱原発方針を見直すべき。
  - ・電力不足、電気料金値上げにより国内業界の空洞化が進み、雇用の維持が困難となる。
  - ・技術や人材の維持が難しく、日本の原子力発電技術の輸出は衰退。
- (3) 国際社会への影響
  - ・世界の原子力平和利用に関する国際的貢献が維持できるか。
  - ・日本の火力発電などの化石燃料への依存が高まれば、化石燃料の国際価格は上昇する。
  - ・日本の地球温暖化対策は後退する。



## 2. Responses to the Strategy

### 2.1 Responses to Nuclear Phase-Out by the end of 2030s

- (1) The strategy leaves many details unclear
  - Renewable energy has its own problems
- (2) The strategy is so harmful to the domestic economy and employment that the government should reconsider it
  - Unstable energy supplies and rising electricity costs would hollow out domestic industries and increase unemployment
  - Nuclear technologies and experts would shrink and that means decline of Japan's nuclear exports
- (3) The strategy affects international society
  - Japan's contributions to worldwide peaceful use of nuclear energy becomes unclear
  - If Japan fills the gap of nuclear energy with fossil fuels, their prices will rise internationally.
  - Japan's effort to cut carbon emissions will suffer a serious setback



## 2. 国内外の反応(続き)

### 2. 2脱原発を進める一方、再処理事業に取り組むことに対する反応

- (1) プルトニウムの需給バランスを崩す恐れがあるため、プルトニウムの利用方策を明確に示すべき。
- (2) 核不拡散上の懸念が生じれば、再処理事業の継続は困難となり、原発運転も停止に追い込まれる。
- (3) その場合、英仏に保管しているプルトニウムと高レベル廃棄物の日本への返還は実行できるか。



## 2. Responses to the Strategy (cont.)

### 2.2 Responses to Continuing Reprocessing while Retreating from Nuclear Energy

- (1) The government should make clear how separated plutonium could be consumed since the strategy might fail to balance plutonium supply and demand
- (2) If Japanese plutonium stockpile become a subject of proliferation concern, it would be hard to continue reprocessing, which is indispensable to the operation of nuclear power plants
- (3) In this case, it is unclear whether Japan will continue to accept plutonium and high-level radioactive waste separated from Japanese spent nuclear fuel reprocessed in Britain and France