

### エネルギー情勢懇談会／第三回会合への意見書

- パリ協定の目標や、持続可能で近代的なエネルギーアクセスなど様々な社会的課題への取り組みを求めるSDGsを踏まえ、各国が長期戦略を策定している中、我が国でも具体的な行動を意識した長期戦略の立案が求められている。
- 80%削減の長期目標は現在の延長線上では実現が厳しく、革新的な技術開発やエネルギー供給構造の抜本的な変革が必要となるが、再生可能エネルギーは、資源の偏在や立地条件、蓄電コスト・技術、系統安定化などの課題があり、国内のエネルギーミックスを考えるに際しては、経済的で安定した電力供給を可能とするベースロード電源をいかに確保できるかが重要。
- 原子力は引き続き選択肢として必要と考えられるが、3E+Sの確保が大前提であり、この要件を備えた原子力発電の稼働が最大どこまで実現し得るか、また我が国が持つ原子力の技術や人材をいかに維持・育成していくか、改めて考えていく必要があるだろう。
- また近年は、各国が政府主導で自動車の電動化に向けた動きなど、需要側における電化の動きが活発化しているが、その電源構成は各国のエネルギー事情により異なっており、我が国もCO<sub>2</sub>の総排出量を発電から最終消費までのバリューチェーンで捉え、最適な電源構成を考えることが重要である。更に温暖化対策の視点では、需要側の電化や供給側の非化石電源化による解決策のみならず、二次エネルギーの6割を占める熱の利用効率化や、需要側の徹底的な省エネの促進など、エネルギー全体の課題を長期的な目線で捉えていくことが重要。
- 他方、国内における温暖化対策に留まらず、我が国が国際社会の低炭素化に向けてどのような役割を果たしていくかという視点も重要。地理的な制約からエネルギー自給率が低い我が国としては、省エネ技術を筆頭に国際社会の低炭素化に資する技術力があり、これら優位性をいかに強化し、どのような貢献ができるのか、具体的に考えていくことが益々重要になるだろう。
- その実現のためには、日本の技術や資金面での海外における貢献が国際的に評価される枠組みが必要であり、政府においては、各国をリードしつつ、我が国が存在感を発揮できる様な国際的な評価の仕組みづくりに率先して取り組むことを期待したい。

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- Many countries are formulating long-term strategies based on the goals of the Paris Agreement, as well as the SDGs, which call for action on various social priorities, including access to sustainable modern energy. In this context, Japan also needs to develop a long-term strategy which bears in mind concrete actions.
- Japan's target of reducing greenhouse gas emissions by 80% will be difficult to achieve simply by the extension of current measures. The solution will require both the development of innovative technologies and fundamental transformation of the energy supply structure. However, there are also issues with renewable energy, including unevenly distributed resources and location, energy storage costs and technologies, and grid stabilization. When thinking about Japan's energy mix, we need to consider ways to secure base-load electric power sources capable of supplying electricity, both economically and reliably.
- It is probably necessary to consider nuclear as one of the options for the future. In this case, however, the major premise is that "3E+S" (energy security, economic efficiency, environmental suitability, and safety) are secured. Therefore, we need to reexamine the maximum extent to which Japan can establish nuclear generation capacity that meets these requirements, as well as how we can maintain and develop necessary technologies and human resources.
- Over the past few years, there has also been an increase in activity in the demand side for electrification, including government-led initiatives to develop electric vehicles. The power source mix varies according to each country's energy situation. In Japan, we need to devise an optimal mix based on total CO<sub>2</sub> emissions throughout the entire value chain, from power generation to final consumption. From the viewpoint of global warming countermeasures, Japan needs to find solutions not only by switching to electric power on the demand side and shifting to non-fossil fuel power generation options on the supply side, but also by making more efficient use of heat, which accounts for 60% of secondary energy, and by encouraging a thorough commitment to energy conservation on the demand side. It is important for Japan to approach all of its energy priorities from a long-term perspective.
- On the other hand, Japan should not limit its global warming countermeasures to domestic initiatives only. Another important perspective that Japan must have is the role that Japan should play in the transition to a low-carbon society as a member of the international community. As a country with a low energy self-sufficiency ratio due to geographical limitations, Japan owns technology, especially in the field of energy conservation, which can be used to contribute to the international community's efforts to reduce carbon emission. It will be increasingly important for

Japan to consider specific ways to strengthen our advantage in these areas, and to think about ways of contribution.

- In order to achieve this outcome, we need a framework to ensure international recognition for Japan's contributions in terms of technology and finance. I hope that the government will take the initiative in creating international assessment mechanisms that would enable Japan to lead other countries and to build its presence within the international community.