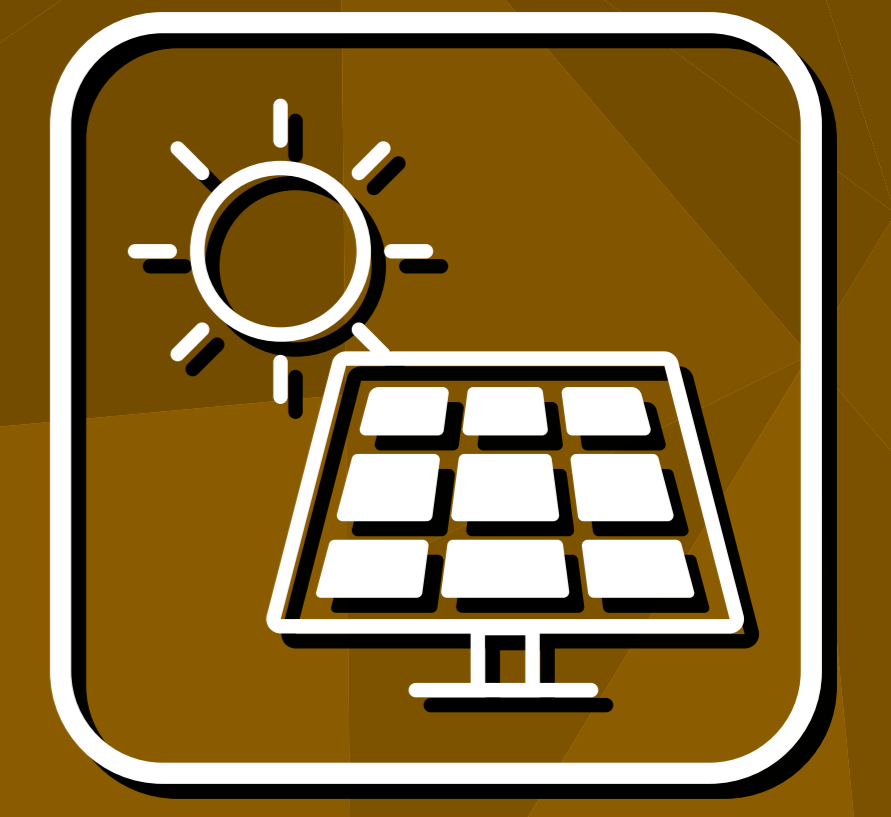


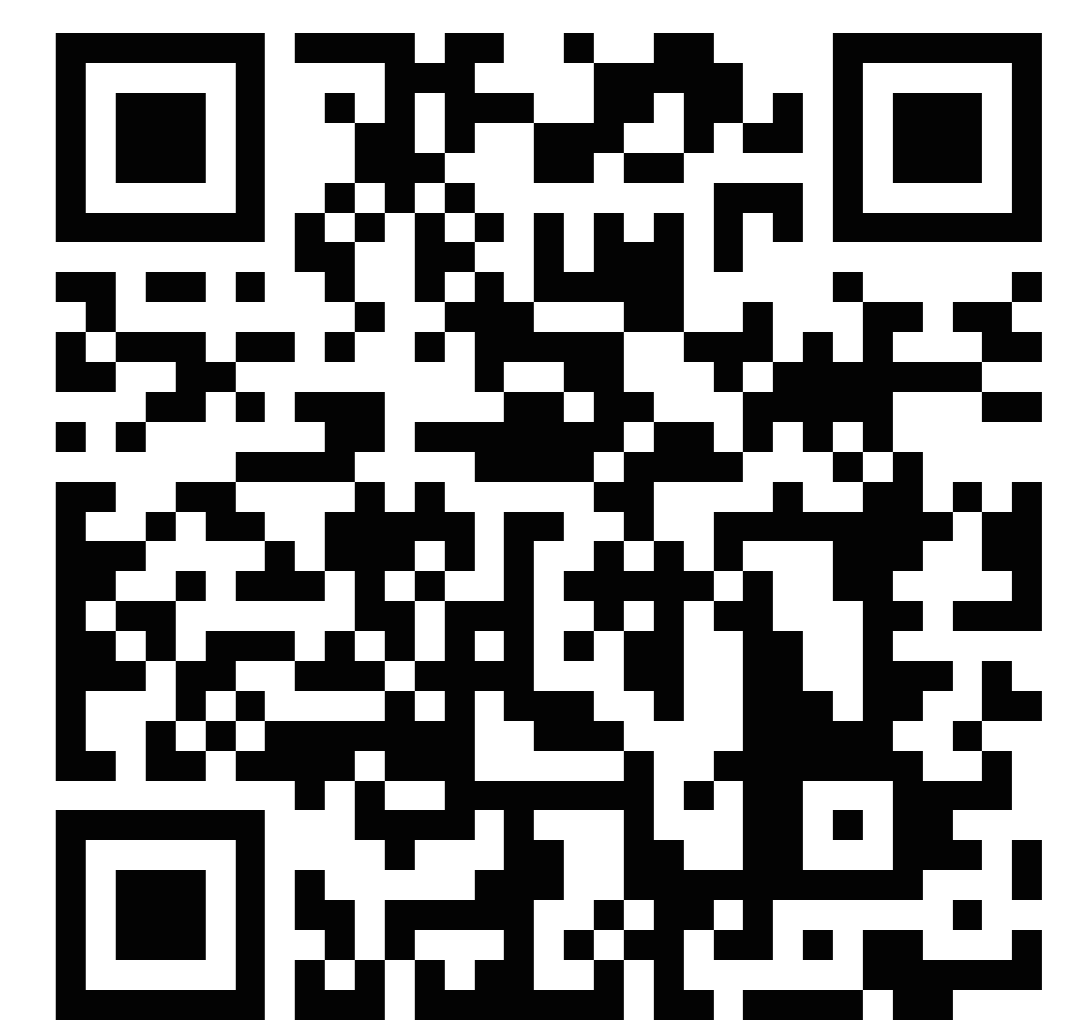
Photovoltaic power generation



Development of technologies to ensure the safety and reliability of solar power generation

Following the publication of Design Guidelines for Ground-mounted Systems 2019, NEDO published Design Guidelines for New Installation Environments of Slopes, Water, and Farming in November 2021, and formulated and published “Design Guidelines for Solar Power Generation Systems of Special Installation Types (Slope-mounted Type, Farming Type, On-water Type) 2023” in April 2023. In FY2025, NEDO published Design Guidelines for Photovoltaic Systems Installed on Buildings for the installation of conventional photovoltaic systems on building roofs and walls.

		Laws and regulations	Standards	Guidelines
Structural equipment	Installation of structures and buildings	<ul style="list-style-type: none"> Electricity Business Act Ministerial Ordinance of Establishing Technical Standards for Electric Equipment Interpretation and explanation of the Ministerial Ordinance of Establishing Technical Standards for Electric Equipment Building Standards Act (architectural structure, 9 m or higher) Act on Prevention of Disasters Caused by Steep Slope Failure (Specified or not) Notice of Handling of Conversion of Agricultural Land (Farming-type solar power generation) Revised FIT (inspection and security) 	JIS C 8955:2017	(3) Building installation type (Planned) 2025 (1) Design Guideline for Ground-mounted Type Handbook of the Japan Association for Wind Engineering
	Ground-mounted			
	Slope-mounted			
	Farming			(2) Design and implementation guidelines for solar power generation systems (Slope-mounted, farming, and on-water)
	On-water			
Electric equipment	Solar cell module	<ul style="list-style-type: none"> Act on Prevention of Disasters Caused by Steep Slope Failure (Specified or not) 	JIS C 8992, 8954, 8951 IEC JIS C 8980, 8961 IEC, JESC system interconnection rules	JPEA Submersion safety guide AIST Direct-current electricity safety guide and technology information
	Peripheral equipment			
Construction management	General			JPEA Design and Construction Ver.5
Maintenance management	Power generation capacity safety		JIS C 8907, 8953	JPEA Maintenance and Inspection Guidelines
	Equipment maintenance			JPEA Project Evaluation Guide Plan Formulation Guidelines of METI



Guidelines (2024)



Accidents on steep slopes

■ Current laws, regulation, standards, and guidelines Source: NEDO



PV for sloping land



PV for Agriculture



Float type PV

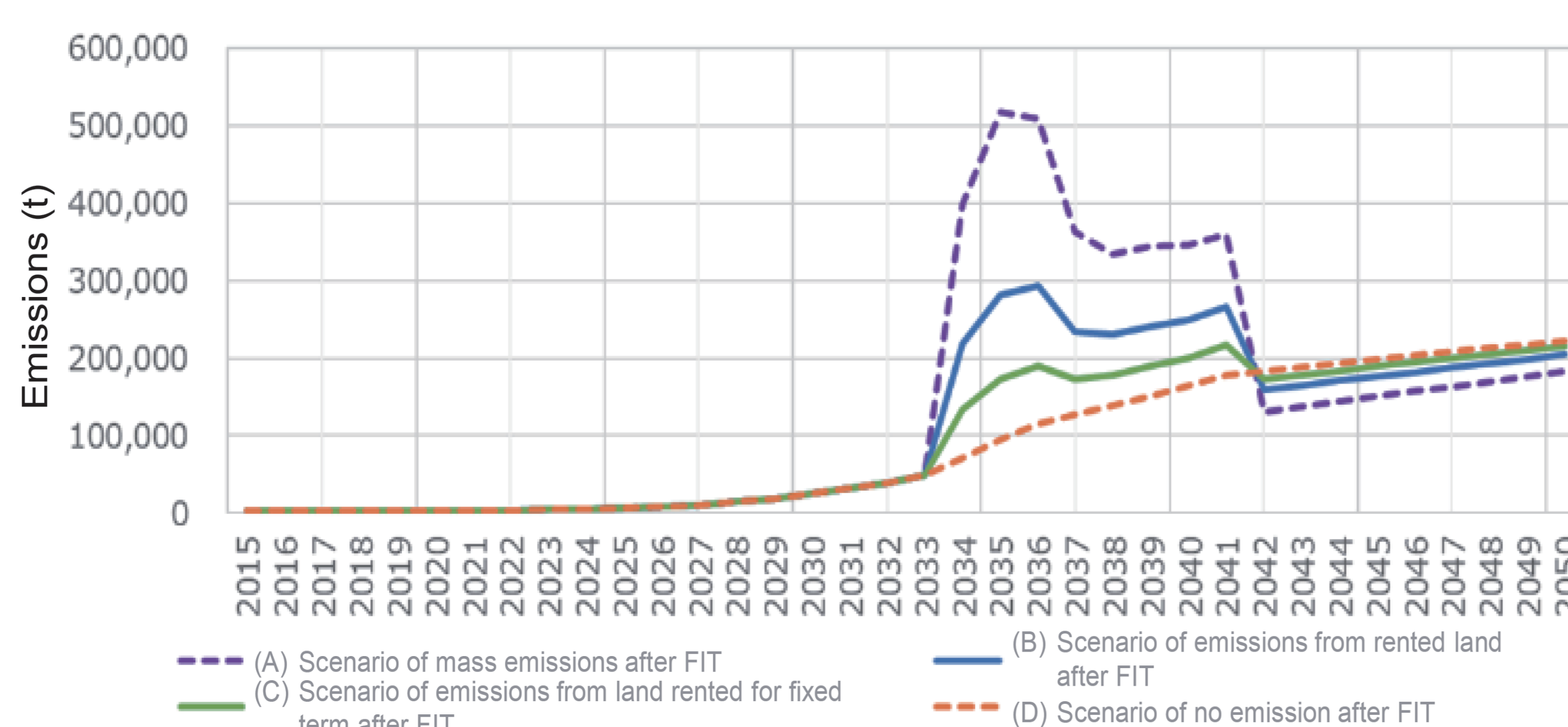


PV for buildings

Development of material recycling technologies for solar cell modules

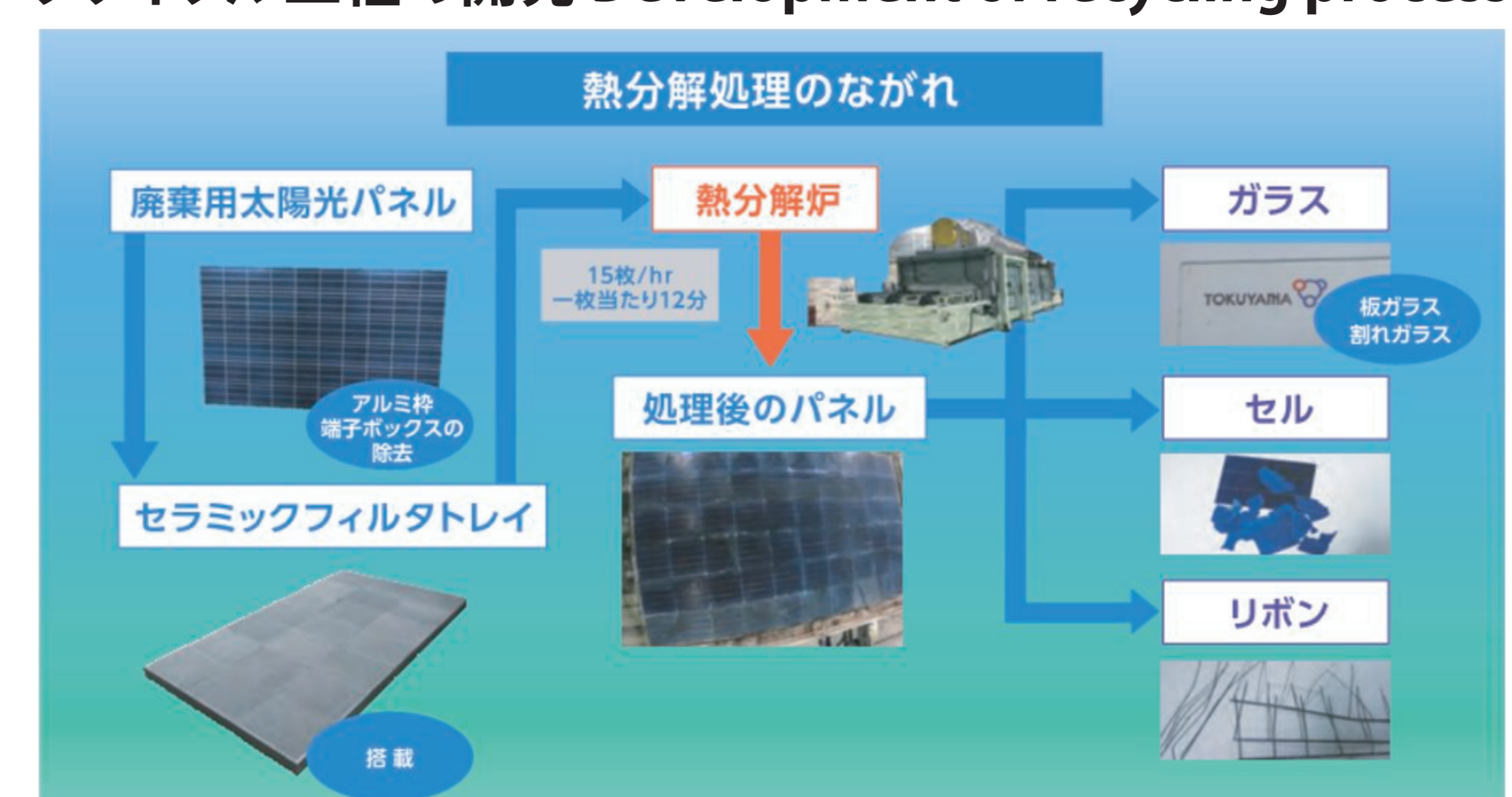
According to the estimate of solar panel emissions by NEDO, solar panel emissions will reach its peak around 2036, at about 190,000 to 290,000 tons, or 1.7% to 2.7% of the final disposal amount of industrial waste. The capacity of the final disposal sites for industrial waste will be used up due to the massive disposal of solar panels. To solve this problem, it is necessary to make effective use of resources, and NEDO is developing recycling treatment technologies to achieve both low cost and high resource recovery rates.

(Final target for 2024: recycling cost of 3 yen/W or less, expected to achieve a resource recovery rate of 80% more)



■ Estimate of solar panel emissions Source: NEDO

リサイクル工程の開発 Development of recycling process



■ Development of recycling technology for solar cell modules by low-temperature pyrolysis method Source: Tokuyama Corporation