

Stop ①: Upopoy National Ainu Museum and Park

Time : 10:15–12:45, March 16 (Thurs.) (2h30m, including lunch)

Topic : Introduction of Ainu culture

[Overview] (From “Facility Information” on the Upopoy website)

The Ainu are an indigenous people in the northern region of the Japanese archipelago, particularly Hokkaido. The Ainu culture is distinctive, with a language that is unrelated to Japanese, a spirituality that holds that spirits dwell in every part of the natural world, traditional dances that are performed at family events and festivals, and crafts such as wood carving and embroidery that incorporate unique patterns.

Upopoy serves as a national center for the revival and development of Ainu culture, an invaluable culture in Japan that is at risk of extinction. Upopoy was created to fulfill multiple roles and functions as a symbol of Japan’s long-term aim to build a vibrant society with a rich, diverse culture in which indigenous peoples are treated with respect and dignity, without discrimination. Experience the richness of Ainu culture while surrounded by the plentiful nature on the shores of Lake Poroto.

“Upopoy” is an Ainu word meaning “singing together in a large group”.

[Tour Details]

- ✓ The tour will see the National Ainu Museum, watch traditional Ainu dancing, and experience a traditional Ainu living space in a reconstructed *cise* (Ainu house)



Stop ②: Tomakomai CCS Demonstration Project Center (Japan CCS Co., Ltd.)

Time : 13:35– March 16 (Thurs.) (1h30m)

Topic : Japan's first demonstration of seabed CCS
[Overview]

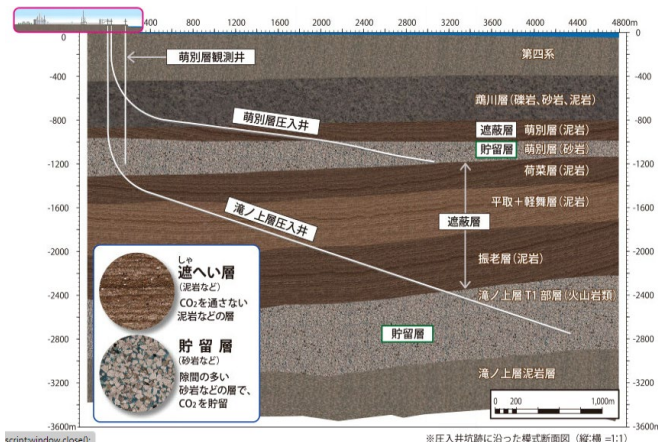
In response to the Japanese government's decision to promote carbon capture and storage (CCS) as a measure against climate change, Japan CCS Co., Ltd. was founded by private funding in 2008.

The Tomakomai CCS Demonstration Project, which began in FY2012 under commission from the national government and other public institutions, succeeded in storing 300,000 tons of CO₂ into the seabed in November 2019.

Since then they have been monitoring its behavior, observing micro-vibrations and natural earthquakes at all times, as well as surveying the marine environment, ensuring there are no leaks.

[Tour Details]

- ✓ The tour will see the CCS demonstration facility, the first project so close to a city and injecting CO₂ under the seabed from land



Stop ③: Lake Utonai

Time : 15:35– March 16 (Thurs.) (1h30m)

Topic : Wild bird conservation and Hokkaido's plentiful nature

[Overview]

With a circumference of 9 km, an area of 275 ha, and average depth of 0.6 m, Lake Utonai is a freshwater lake. It was the first bird sanctuary to be designated in Japan, in 1981.

The wetlands and woods along the shores of the lake are a treasure trove of wild birds. Around 270 species of the approximately 630 species confirmed in Japan have been found at the lake, a major stopover point for migratory birds in Japan.

The lake and its surroundings were listed in 1991 in the Ramsar Convention on Wetlands of International Importance Especially as Waterfowl Habitat, and designated as a national Wildlife Protection Area in 1982.

[Tour Details]

- ✓ The tour will experience Hokkaido's ample nature from the walking trail along the lake shore, and hear about initiatives to conserve and recover over 1000 birds since 2002



Lake Utonai Wildlife Conservation Center

Hokkaido Press Tour

Stop ④ : Ishikari RE Zone

Time : 8:45– March 17 (Fri.) (1h30m)

Topic : Aiming to establish Japan's first 100% renewable energy area

[Overview]

The City of Ishikari plans to establish a 100-hectare RE Zone providing renewable energy in the Ishikari Bay New Port area, an industrial center for the Sapporo area. By producing and using renewable energy locally, the aim is to reduce carbon usage while attracting industry. This is the first initiative in Japan aiming for 100% renewable energy usage in an industrial park.

The area is home to 23 wind power stations, one biomass power facility, and 8 large-scale solar power farms. There are also plans for an offshore wind farm to begin operations in 2023 (100 MW), and for a biomass power station using 100% domestically produced chips as fuel.

To take advantage of the cool climate and ample renewable energy, last year Kyocera began construction of data centers, which require ample electricity. Operations are to begin in 2024.

[Tour Details]

- ✓ Travel by bus to see renewable energy facilities spread throughout a wide area
- ✓ Interview with City of Ishikari official about aiming to be the first in Japan to have a 100% renewable energy zone, and with a Kyocera Communication Systems Co., Ltd. representative about why they decided to do business in Ishikari



Biomass plant
and wind turbine



Storage batteries

Stop ⑤ : Atsuta, Ishikari Microgrid

Time : 11:00– March 17 (Fri.) (1h30m, incl. lunch)

Topic : Initiatives for local production and consumption of energy, and improved disaster preparation

[Overview]

The Atsuta district in Ishikari had fragile transportation and power grids, making it likely to become isolated in times of disaster, and issues with stable energy supply. The City of Ishikari made it into a model region for local production and consumption of energy.

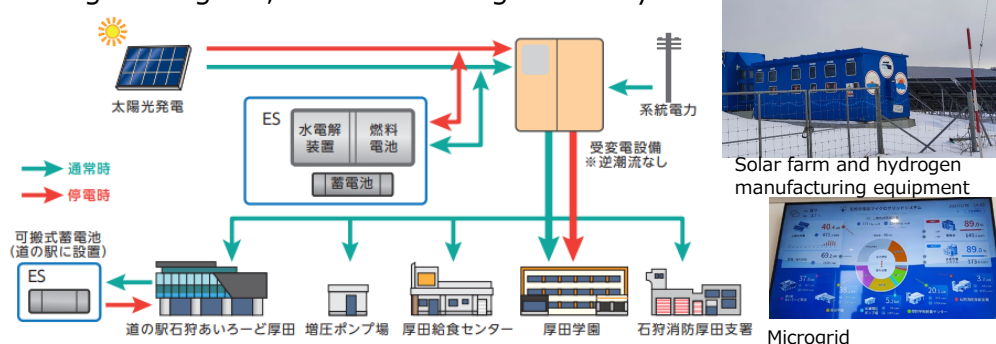
In addition to providing solar power to a school, a center for disaster preparation, they are also aiming to provide a stable power supply by providing solar power to public facilities such as roadside stations and school lunch centers.

They have also made a framework to use the excess electricity from solar power to manufacture hydrogen and store it, making it possible to provide power to the school for approximately 72 hours in a blackout, by using batteries and electricity made from the hydrogen.

As a model for implementing similar power supply systems in other regions with the same characteristics, other local governments have come to Atsuta to learn.

[Tour Details]

The tour will visit the facility at the heart of the model region for local production and consumption of energy and improved disaster preparation, as well as Takasago Thermal Engineering Co., Ltd. which designed the system



Stop ⑥: Moerenuma Park

Time : 13:30– March 17 (Fri.) (1h)

Topic : Famous Sapporo tourist destination using green energy

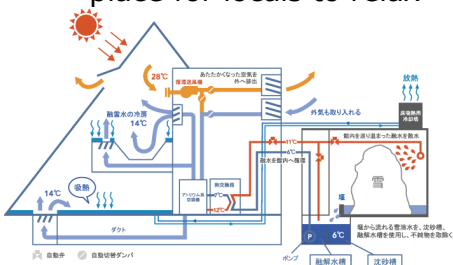
[Overview]

As a base for the Circular Greenbelt Concept to surround Sapporo in parks and green spaces, Moerenuma Park is a 189 ha park built in 2005 on top of a landfill.

In 1988, sculptor Isamu Noguchi made the master plan for the park based on the concept of the entire park being a single sculpture (he passed away the same year). The large space has a number of artistic facilities, such as a glass pyramid and Moere Hill, and visitors can enjoy a beautiful fusion of nature and art.

[Tour Details]

- ✓ The tour will visit the glass pyramid Hidamari, which uses the local green energy source of snow for its cooling system
- ✓ The park is an environmentally-friendly work of art, and a place for locals to relax



Stop ⑦ To be decided

Stop ⑧: Tokuyama Corporation Solar Battery Recycling Demonstration Facility
Time : 17:00– March 17 (Fri.) (1h)

Topic : Joint project with NEDO, introduce unique low-temperature pyrolysis method

[Overview]

Tokuyama Corporation is a chemicals manufacturer established in 1918 in Tokuyama (now Shunan), Yamaguchi, with the goal of domestically producing soda ash, an ingredient for glass which Japan relied on imports for. The company now has strengths in the fields of electronic materials, with a 20% share of the global market for polycrystalline silicon (used in semiconductors); life sciences, such as dentistry equipment; and the environment, with recycling businesses using unique technology.

At the demonstration facility in Nanporo, efforts are being made to commercialize advanced recycling technology for solar panels using low-temperature pyrolysis, jointly developed with the New Energy and Industrial Technology Development Organization (NEDO). Solar panels are generally said to have a lifespan between 20 and 30 years, so the mid-2030s will see large numbers begin to be disposed of.

Currently, only the aluminum frame of solar panels can be recycled, and the panel itself is generally shattered and sent to landfills, which could strain landfill capacities.

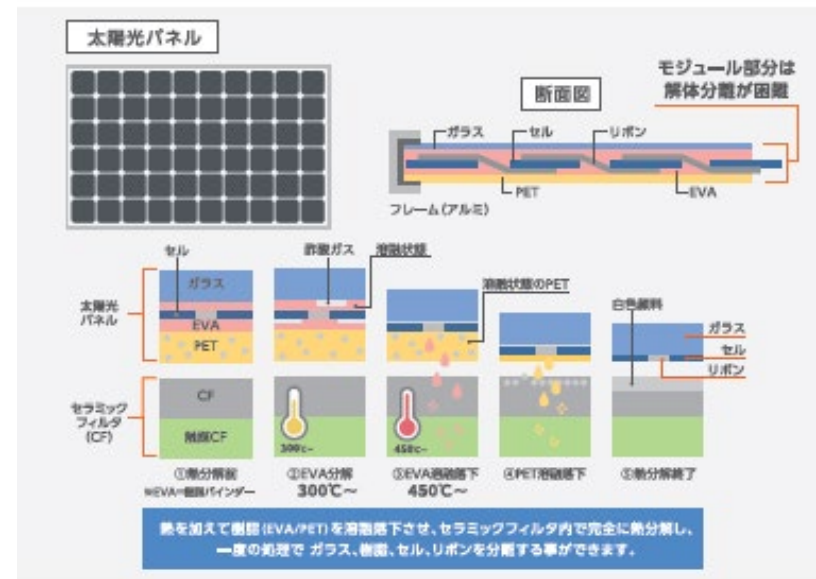
With unique low-temperature pyrolysis technology using a catalyst, Tokuyama has made it possible to dispose of and extract the materials solar panels are made of at high quality. Together with NEDO, they are working on technological development for the recycling process, looking at the possibility of recycling each material, and recovering 80% or more of resources from the sheet glass, cells, and ribbons, to contribute to a material-cycle society.

[Tour Details]

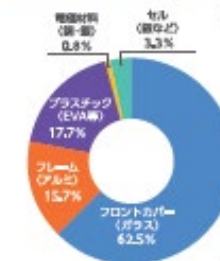
- ✓ A demonstration will be performed of the pyrolysis process for a solar panel
- ✓ Interview with Tokuyama Corporation Executive Officer and Eco Business Div. General Manager Tomohiro Inoue

トクヤマ独自の低温熱分解法

リサイクル処理の際、フレームおよびモジュール部分の解体が必要です。
 フレームは解体してアルミとして再生可能ですが、
 モジュール部分は、ガラス、樹脂(EVA/PET)、セル、リボンが
 強固に結合しており解体分離が非常に困難です。



太陽光パネルの重量構成比



ガラス ▶ 板ガラス材料
 プラスチック ▶ 熱分解時の熱源 (サーマルリサイクル)
 アルミフレーム ▶ アルミ
 樹脂材料 (リボン) ▶ 銅、銀など
 セル ▶ シリコンなど

ほぼ全ての部品がリサイクル可能に

60%を占めるガラスを
 板ガラスの原材料ほか、
 リサイクル材として活用することができます。

