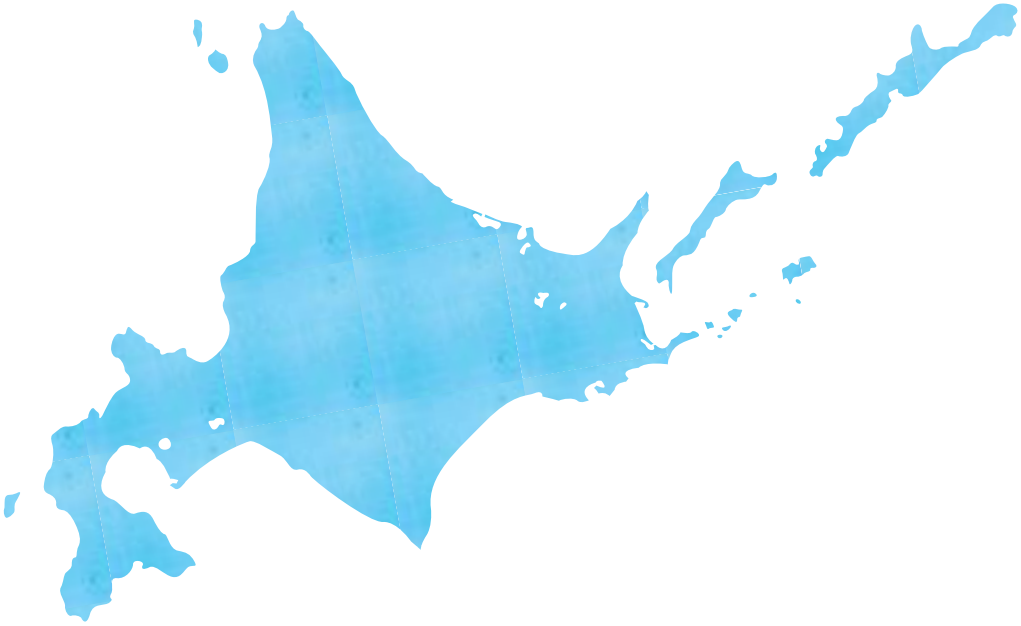


As of May 2019

HOKKAIDO

BUSINESS LOCATION GUIDEBOOK

Hokkaido, the Perfect Place for Diversification of Risk

With its natural splendor, fresh, delicious food and unique history and culture, Hokkaido has a lot to offer. Its star is growing in Asia and worldwide, with a constant influx of domestic and overseas tourists.
For businesses putting together a BCP, Hokkaido is also the perfect place for diversification of risk and a backup center for industrial activities, thanks to the low risk of a disaster occurring in both Hokkaido and regions such as the Tokyo metropolitan area at the same time, abundant existence of renewable energy sources, extensive land, sea and air transport infrastructure and a cool, snowy climate that can be used to support environmentally friendly business activities.
These benefits have already attracted many businesses to Hokkaido. It is used as a processing and assembly site by many companies to decentralize their manufacturing bases or restructure their supplier chain, and has been adopted as an expansion site for companies in the food production industry, where it is well recognized for its abundant, high-quality ingredients that can be used for processing. Environmentally friendly data centers have also been established, as energy can be conserved to a large degree by making use of the cold air outside, and numerous companies have moved their head offices here. The merits of Hokkaido are now attracting more attention than ever, both within and outside Hokkaido.
Hokkaido is full of great possibilities and potential for unlocking the future of your business.
On September 6 last year, Hokkaido's viability as a BCP site was put to the test by a more severe earthquake than ever before, which caused major disruptions to people's lives and the region's economic activities. We are deeply grateful for the concern and support expressed to us by so many people.
Normal life and economic activities have resumed in almost all of Hokkaido, and the supply of products and services by Hokkaido-based companies is now just the same as before the earthquake. Even the most severely damaged areas are well on their way to recovery.
Now that Hokkaido is back on its feet, this booklet has been created to further promote Hokkaido as a business location by providing companies outside Hokkaido with a deeper understanding of locations in Hokkaido. We hope that you will consider this excellent region in northern Japan when expanding your business.
It is our sincere hope that Hokkaido will bring major business opportunities for you.

President of the Committee for the Promotion of Investment in Hokkaido
Naomichi Suzuki, Governor of Hokkaido

Contents

The Perfect Place for Diversification of Risk

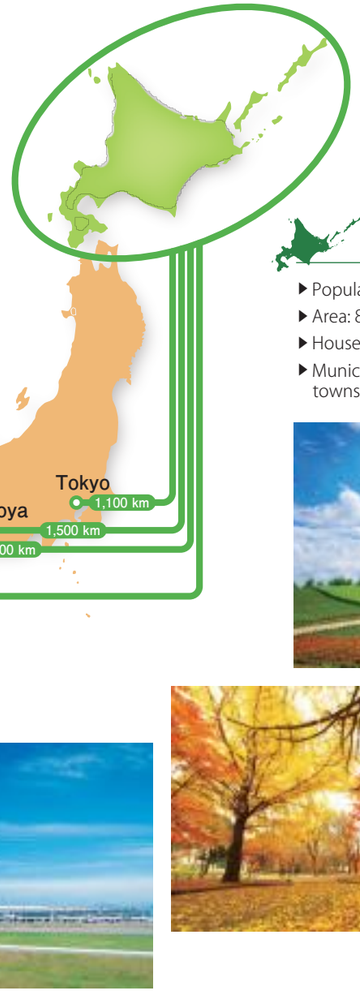
3 Key Points in Finding the "Perfect Place for Diversification of Risk"

(1) Low Risk of a Disaster Occurring in both Hokkaido and Regions Such as the Tokyo Metropolitan Area at the Same Time
(2) Energy Supplies
(3) Diversified Transport Infrastructure

Key Point 1 Low Risk of a Disaster Occurring in both Hokkaido and Regions Such as the Tokyo Metropolitan Area at the Same Time

Hokkaido, the Perfect Place for Diversification of Risk

Hokkaido is less likely than other areas to be affected by typhoons and lightning, and its distance from regions such as the Tokyo metropolitan area means that if a natural disaster such as an earthquake occurs in a region such as the Tokyo metropolitan area, the risk of it affecting Hokkaido too is low, making Hokkaido the ideal location for dispersing risk.



Basic Details of Hokkaido

- Population: 5,339,539
- Area: 83,423㎢
- Households: 2,772,845
- Municipalities: 179 cities, towns and villages

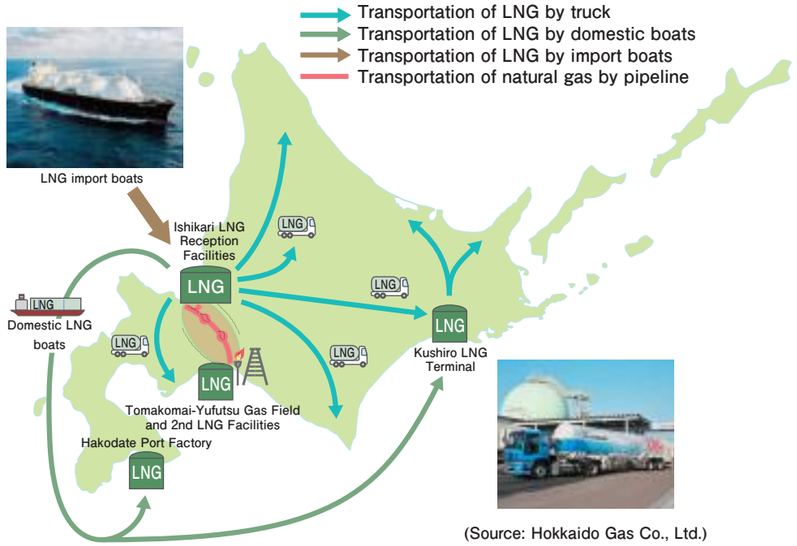
Key Point 2

Energy Supplies

Japan's Largest LNG Terminal

In 2012, the Ishikari Bay New Port LNG Terminal began operations in Ishikari. The liquefied natural gas (LNG) terminal stores 180,000 kiloliters of gas. In addition to supplying LNG to Sapporo by pipeline, it is used to supply LNG to companies throughout Hokkaido. A second LNG tank holding 200,000 kiloliters was put into operation at the LNG terminal in September 2016, a third holding 230,000 kiloliters commenced operations in 2018 and a fourth (also 230,000 kiloliters) is scheduled to be completed in 2020, setting the terminal on course to be the largest in Japan.

■Hokkaido's LNG Supply Framework

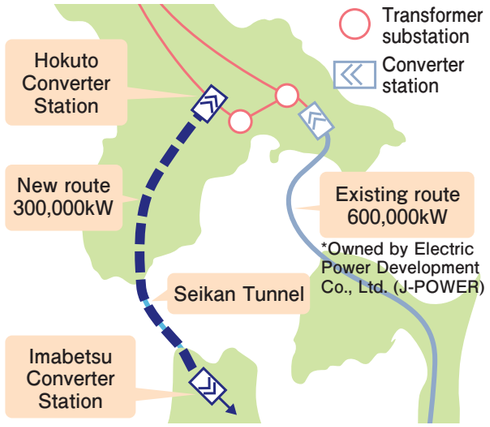


(Source: Hokkaido Gas Co., Ltd.)

Power supply

Electric power facilities are currently being built in Hokkaido to ensure a steady supply of electricity in future. Unit 1 at the new thermal electric power station in Ishikari Bay New Port (569,400kW, operation commenced February 2019) and the Shin-Kitahon HVDC Link connecting Hokkaido and Honshu (300,000kW, operation commenced March 2019) are playing a key role in measures to ensure an even steadier and more reliable supply of electricity. Various measures concerning supply and demand of power in the Hokkaido area are underway to ensure that backup power of at least 3%, the minimum needed to ensure a steady supply of power, will be available in the event of an unplanned outage in large-scale power supply facilities during winter, when demand for electricity is at its peak.

Ishikari Bay New Port Power Station (LNG thermal power station)
(Source: Hokkaido Electric Power Co., Inc.)



Route of Shin-Kitahon HVDC Link
(Source: Hokkaido Electric Power Co., Inc.)

Key Point 3

Diversified Transport Infrastructure

Hokkaido – Close to the Rest of the World

Looking at a map of the northern hemisphere, you can see that most advanced industrialized nations are concentrated in the same latitudinal "belt." You can see that Hokkaido is actually the closest region of Japan to the rest of the world. Furthermore, the distance of the Arctic passage is around 60% of that of the southern route connecting Europe and the Far East, and is therefore attracting an increasing amount of attention for new routes.

Network of 13 Airports throughout Hokkaido

There are 13 airports throughout Hokkaido. These airports are connected by various services in addition to providing services to destinations outside Hokkaido. The large number of air routes makes it easy to travel to, from and around Hokkaido, making it a valuable place for both your business and your daily life. There are around 480 flights departing and arriving in Hokkaido each day. There are services to major cities outside Hokkaido from 10 airports, including services to Tokyo from 9 airports. There are also 17 regular international services to destinations such as South Korea (3 routes), China (6 routes), Taiwan (2 routes), Singapore, Thailand, Malaysia and Yuzhno-Sakhalinsk from airports such as New Chitose, Hakodate and Asahikawa.

■Flight Times and Number of Flights from Major Hokkaido Airports to Airports Outside Hokkaido

	Haneda	Sendai	Chubu	Kansai/ Itami	Total number of departing and arriving flights (Domestic)
New Chitose (36 minutes by train from Sapporo city center)	1:40	1:15	1:50	2:20	—
	106	32	36	44	364
Asahikawa (Approx. 30 minutes by car from Asahikawa city center)	1:45	—	1:55	—	—
	14	—	2	—	16
Kushiro (Approx. 40 minutes by car from Kushiro city center)	1:45	—	—	2:30	—
	12	—	—	2	28
Obihiro (Approx. 40 minutes by car from Obihiro city center)	1:45	—	—	—	—
	14	—	—	—	14
Hakodate (Approx. 20 minutes by car from Hakodate city center)	1:30	—	1:35	1:40	—
	16	—	2	4	40
Memanbetsu (Approx. 30 minutes by car from Abashiri city center and approx. 40 minutes by car from Kitami city center)	1:55	—	2:05	—	—
	10	—	2	—	24

Top: Flight time
Bottom:Number of flights departing and arriving each day

As of May 2019

Up to 53 Return Flights per Day between Sapporo (New Chitose) and Tokyo (Haneda) - the Busiest Domestic Route in Japan

The route between New Chitose Airport and Haneda Airport is the busiest of all of Japan' s domestic routes, with 53 return flights per day. Operating from 6 AM to 12 AM, there is an average of 3 return flights per hour. With 19.43 million passengers on domestic flights, New Chitose is Japan's second busiest domestic airport after Haneda (As of FY 2017). A new international terminal was opened in March 2010.

Convenient Morning-to-Night Schedule

There are flights between Hokkaido and Honshu from early in the morning to late at night, making it possible to take business trips without needing to stay the night. The first flight from Haneda to New Chitose departs at 6:15am and the last flight from New Chitose to Haneda departs at 9:50pm.

LCC Services Make Hokkaido Even More Accessible

In 2012, a low-cost carrier (LCC) began providing services between Honshu (the mainland) and Hokkaido. There are now 5 LCCs providing services, with lower fares than major airlines.

■LCC Services

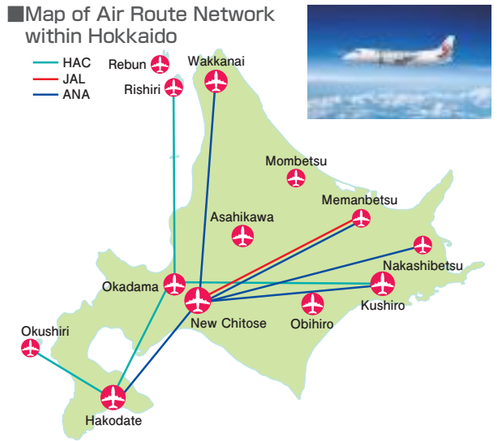
As of March 2019

Peach Aviation	New Chitose - Kansai	3-5 return flights per day
	Kushiro - Kansai	1 return flights per day
Jetstar Japan	New Chitose - Narita	5-7 return flights per day
	New Chitose - Kansai	2 return flights per day
	New Chitose - Chubu	2 return flights per day
Vanilla Air	New Chitose - Narita	5-7 return flights per day
Spring Airlines Japan	New Chitose - Narita	1 return flights per day
Air Asia Japan	New Chitose - Chubu	2 return flights per day

Air Services Make it Easy to Get Around Hokkaido

JAL, ANA and Hokkaido Air System (HAC) provide air services within Hokkaido. With 9 routes and around 30 return flights per day, this is a quick and easy way to get around Hokkaido.

■Map of Air Route Network within Hokkaido



New Chitose Airport

■Departure Times of First and Last Flights between Major Hokkaido Airports and Major Airports Outside Hokkaido

	New Chitose		Asahikawa		Kushiro		Obihiro		Hakodate		Memanbetsu	
	First flight	Last flight	First flight	Last flight	First flight	Last flight	First flight	Last flight	First flight	Last flight	First flight	Last flight
Haneda Airport	7:30	21:50	9:15	20:10	9:55	20:10	8:55	20:05	9:15	19:35	9:35	20:10
	6:15	21:00	6:55	17:50	7:45	17:50	6:55	17:45	7:15	17:30	7:10	17:45
Chubu Centrair Airport	8:40	21:25	15:30	same as on the left	—	—	—	—	13:05	same as on the left	16:50	same as on the left
	7:15	19:30	13:05	same as on the left	—	—	—	—	11:00	same as on the left	14:20	same as on the left
Kansai/Itami Airport	7:40	20:25	—	—	12:30	same as on the left	—	—	13:20	13:50	—	—
	8:00	20:20	—	—	9:50	same as on the left	—	—	11:05	11:45	—	—

Top: Hokkaido airport → airport outside Hokkaido Bottom: Airport outside Hokkaido → Hokkaido airport

As of May 2019

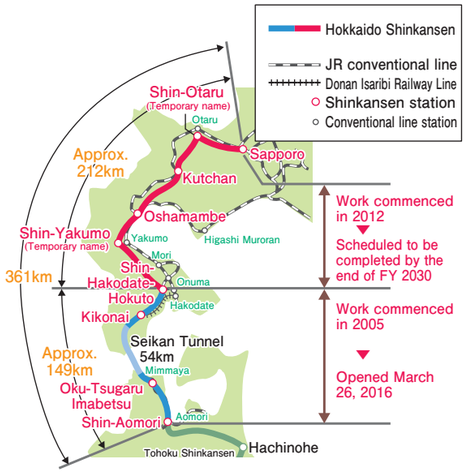
Smooth Road Transportation with Little Traffic Congestion

Motorways, such as high standard arterial highways, are constantly being developed in Hokkaido to ensure smooth road transportation. The total planned national motorway length is 1,825km connecting major cities across southern, central, northern, and eastern Hokkaido, of which 1,165km is already open for use as of the end of March 2019.

New Chitose Airport Interchange

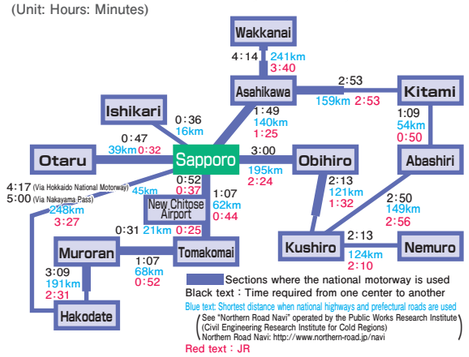
Hokkaido Shinkansen will Further Increase Business Opportunities

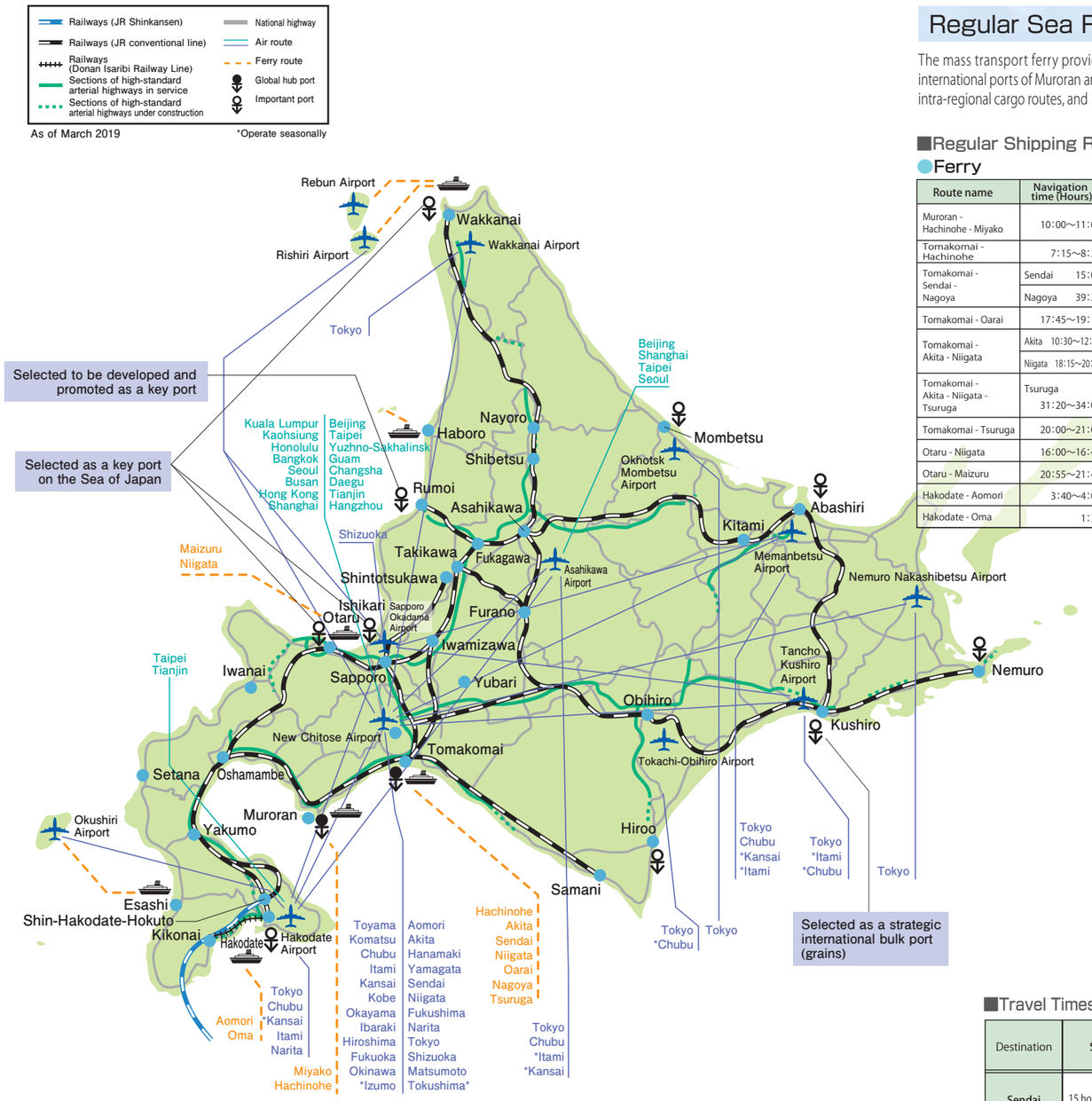
With the stretch of the Hokkaido Shinkansen between Shin-Aomori and Shin-Hakodate-Hokuto opened in March 2016, it is now possible to reach Shin-Hakodate-Hokuto from Tokyo in as short a time as 3 hours and 58 minutes. The stretch between Shin-Hakodate-Hokuto and Sapporo was approved in 2012 and construction began in the same year. It is expected to be opened at the end of FY 2030.



■Traveling Times between Major Cities by JR and Road

(Unit: Hours: Minutes)





JR Freight Covers All Areas of Hokkaido

Rail freight transportation is the most environmentally friendly cargo transportation method, with around 1/10 of the CO2 emissions per transportation unit of trucks. There are 14 stations in Hokkaido handling container trains, which are connected to around 150 stations throughout Japan. The stations are serviced by around 20 trains per day bound for outside Hokkaido. Most are 12 ft container trains, but some of the freight trains can hold 31 ft containers with the same loading capacity as a large truck.

Regular Sea Routes Allowing Mass Transport

The mass transport ferry provides a coordinated link between land and air routes. There are 35 ports in Hokkaido, including the international ports of Muroran and Tomakomai, that are serviced by 11 ferry routes between Hokkaido and Honshu. There are 17 regular intra-regional cargo routes, and 11 regular overseas cargo routes from ports such as Ishikari Bay New Port and Tomakomai Port.

■Regular Shipping Routes for Main Ports (As of October 2018)

●Ferry

Route name	Navigation time (Hours)	Number of services
Muroran - Hachinohe - Miyako	10:00～11:05	6 scheduled departures per week
Tomakomai - Hachinohe	7:15～8:30	4 daily departures
Tomakomai - Sendai - Nagoya	Sendai 15:00	1 daily departure
	Nagoya 39:30	1 scheduled departure every other day
Tomakomai - Oarai	17:45～19:15	12 scheduled departures per week
Tomakomai - Akita - Niigata	Akita 10:30～12:05	5 scheduled departures per week
	Niigata 18:15～20:00	
Tomakomai - Akita - Niigata - Tsuruga	Tsuruga 31:20～34:00	1 scheduled departure per week
Tomakomai - Tsuruga	20:00～21:00	1 daily departure
Otaru - Niigata	16:00～16:45	6 scheduled departures per week
Otaru - Maizuru	20:55～21:45	1 daily departure
Hakodate - Aomori	3:40～4:00	16 daily departures
Hakodate - Oma	1:30	2 daily departures

●Regular Domestic Cargo

Route name	Number of services
[Tomakomai] - Ibaraki (Hitachinaka)	11 scheduled departures per week
[Tomakomai] - Ibaraki (Hitachinaka)-Shimizu - Oita	1 scheduled departure per week
[Tomakomai] - Tokyo	6 scheduled departures per week
[Tomakomai] - **[Kushiro]** - Tokyo	2 scheduled departures per week
[Tomakomai] - Yokohama	1 scheduled departure per week
[Tomakomai] - Keihin	2 scheduled departures per week
[Tomakomai] - **[Muroran]*** - Hachinohe - Miyako - Sendai - Hitachinaka - Yokohama (service does not always stop in Muroran)	1 scheduled departure per week
[Tomakomai] - Hachinohe - Kawasaki - Oppama- Sendai	3 scheduled departures per week
[Tomakomai] - Tsuruga	6 scheduled departures per week
[Tomakomai] - Sendai-Shiogama - Nagoya - Sendai-Shiogama	3 scheduled departures every 4 days
[Tomakomai] - Hachinohe - Nagoya - Sendai-Shiogama	1 scheduled departure every 4 days
[Tomakomai] - **[Kushiro]** - Sendai-Shiogama - Tokyo - Nagoya - Tokyo - Sendai-Shiogama	1 scheduled departure per week
[Tomakomai] - **[Kushiro]** - Sendai-Shiogama - Tokyo - Osaka - Tokyo - Sendai-Shiogama	2 scheduled departures per week
[Tomakomai] - **[Kushiro]** - Sendai-Shiogama - Tokyo - Osaka - Nagoya - Sendai-Shiogama	1 scheduled departure per week
[Tomakomai] - Tokyo - Shimizu - Osaka - Shimizu - Tokyo - Sendai	1 scheduled departure per week
[Kushiro] - Ibaraki (Hitachi)	1 daily departure
[Kushiro] - Tokyo - Funabashi	1 scheduled departure per week

●Regular Overseas Cargo

Route name	Number of services
Vancouver - Tacoma - **[Tomakomai]** - Busan - Hakata - Osaka - Nagoya - Shimizu - Tokyo - Tacoma - Vancouver	1 service every 2 weeks
Busan - **[Tomakomai]** - Busan	1 scheduled departure per week
Busan New Port - Busan - Sendai - Hachinohe - **[Tomakomai]** - Busan - Busan New Port	1 scheduled departure per week
[Tomakomai] - Busan - Busan New Port - **[Ishikari Bay New Port]** - **[Tomakomai]**	1 scheduled departure per week
Dalian - Qingdao - Shanghai - Niigata - Fushikitoyama - **[Otaru]** - Maizuru - Dalian	1 scheduled departure per week (2-week ship route)
Busan - Akita - **[Tomakomai]** - Busan - Busan New Port - Ulsan - Shanghai	1 scheduled departure per week
Busan - Shimizu - Sendai - Hachinohe - **[Kushiro]** - **[Tomakomai]** - **[Hakodate]** - Busan - Hitachinaka - Busan - Ulsan - Gwangyang - Ningbo - Shanghai - Busan	1 scheduled departure per week
Dalian - Qingdao - Busan - Kanazawa - Niigata - **[Tomakomai]** - **[Kushiro]** - Sendai - Onahama - Shimizu - Busan - Ulsan - Gwangyang - Dalian	1 scheduled departure per week
Shanghai - Ningbo - Busan - Shimizu - Hitachinaka - Onahama - Sendai - Hachinohe - **[Tomakomai]** - **[Muroran]** - Sakata - Busan - Ulsan - Gwangyang - Shanghai	1 scheduled departure per week
Busan - **[Tomakomai]** - **[Ishikari Bay New Port]** - Busan New Port -Busan - Manila South Port - Busan	1 scheduled departure per week
Vladivostok - **[Otaru]** - Fushikitoyama - Vladivostok	2 scheduled departures per month

■Travel Times between Major JR Freight Terminals in Hokkaido (Revised March 2019)

Destination	Sapporo	Tomakomai	Asahikawa	Hakodate	Obihiro	Kushiro
Sendai	15 hours 35 minutes	14 hours 25 minutes	18 hours 08 minutes	12 hours 20 minutes	33 hours 20 minutes	37 hours 50 minutes
Tokyo (Sumidagawa)	18 hours 10 minutes	19 hours 45 minutes	25 hours 25 minutes	15 hours 20 minutes	24 hours 36 minutes	27 hours 40 minutes
Nagoya	30 hours 25 minutes	29 hours 45 minutes	37 hours 45 minutes	26 hours 40 minutes	41 hours 30 minutes	49 hours 00 minutes
Osaka	28 hours 27 minutes	27 hours 22 minutes	51 hours 52 minutes	24 hours 37 minutes	50 hours 47 minutes	55 hours 17 minutes
Fukuoka	38 hours 09 minutes	42 hours 24 minutes	66 hours 14 minutes	37 hours 49 minutes	45 hours 59 minutes	69 hours 39 minutes

*Indicated times are the shortest time between departure from the handling track and the start of unloading

Utilization of Renewable Energy and Cool Weather

Richer in Renewable Energies than Anywhere Else in Japan

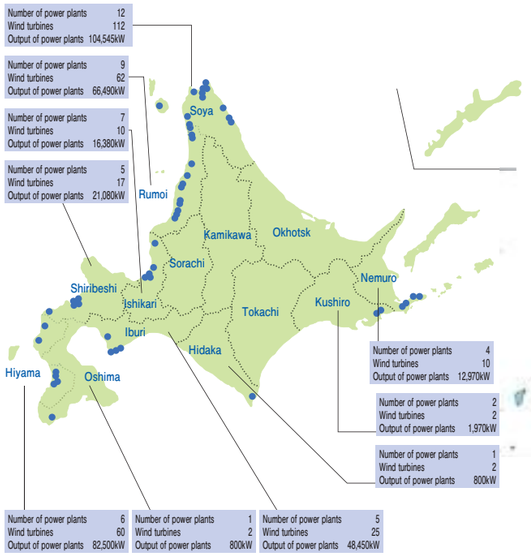
Hokkaido's Renewable Energy Potential

Hokkaido has an abundance of diverse energy sources, including solar power, wind power, biomass, geothermal power and coal, and has greater potential for use of new energy sources than any other prefecture in Japan.

Wind Power Generation

Wind turbines are mainly being introduced on the Sea of Japan coast of Hokkaido due to the excellent wind conditions. As of the end of March 2018, 302 wind power generators have been installed, with an overall capacity of 355,985kW, making this area one of the most advanced regions in Japan for wind power generation.

■Status of General Subprefectural Bureau Installations



(Source: Ministry of Economy, Trade and Industry, Hokkaido Industrial Safety and Inspection Department)

Uehira Green Hill Wind Farm (Tomamae)

■Abundance of New Energy Sources in Hokkaido

Wind Power Generation	**No.1 nationwide**
Geothermal power	**No.1 nationwide**
Medium/small-scale hydro-electric power generation (less than 30,000 kW)	No. 2 nationwide
Solar power generation (non-residential)	No. 2 nationwide

(Source: Initiatives for Increased Implementation of New Forms of Energy in Hokkaido, Hokkaido Government (November 2017))

Solar Power Generation

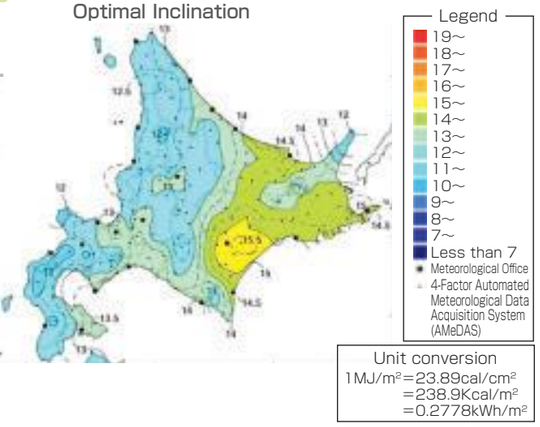
Solar power generation converts sunlight directly into electricity. It is a clean source of energy that does not produce CO2 emissions, and is expected to be key in the accomplishment of a low-carbon society. In addition to using these sources in public facilities and homes, Mega Solar sites are being developed throughout Hokkaido, making use of the prefecture's abundant solar radiation and vast land.

●Solar Power Generation Efficiency

・1℃ Cooler = Up to 0.4% Greater Output!

(At 0℃ or above) (Source: Japan Photovoltaic Energy Association)

■Annual Average Amounts of Solar Radiation at Optimal Inclination



■Annual Amounts of Solar Radiation at Optimal Inclination in Major Cities

Obihiro	4.29	Nagoya	4.21	Kitami	3.93	Sapporo	3.82	Hakodate	3.78
Kushiro	4.19	Fukuoka	3.94	Osaka	3.91	Tomakomai	3.81	Tokyo	3.74

(Source: NEDO Solar Radiation Database, Unit: kWh/m² per day)
(New Energy and Industrial Technology Development Organization)

Wakkanai Mega Solar Power Station (Wakkanai)

Utilization of Clean Energy and Cool Weather

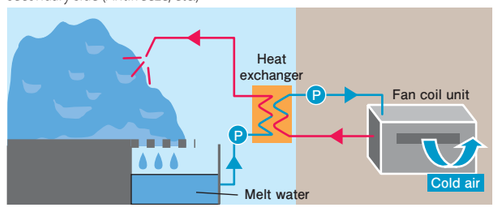
An Eco-Friendly New Energy

Snow and ice energy is a novel way of storing snow and ice collected during the winter for use in air conditioners and refrigerators in the summertime. This system is attracting attention as an eco-friendly source of energy, and has already been introduced to some parts of Hokkaido.
Another technology is "Free Cooling," which generates cold water through the direct use of cold outdoor air from cool and cold seasons (i.e., seasons other than summer) in heat exchange instead of using cooling machines. This technology saves a great deal of energy, especially in facilities that use refrigeration throughout the winter.
Such utilization of the cool weather not only reduces the cost of cooling products, equipment and air-conditioning within buildings, but also contributes to low energy consumption, and allows increased control of CO2 emissions. It is expected that this technology will be seen increasingly more in industrial facilities such as factories.

●Snow and Ice Energy Supply Methods for Rooms and Warehouses

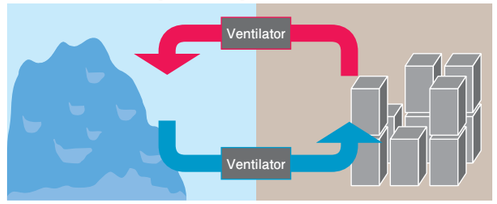
1) Cold Water Heat Exchange Cycle Method

Melt water or antifreeze cooled with snow is circulated into the primary side of a heat exchanger with a pump, cooling the liquid circulating through the secondary side (Antifreeze, etc.)



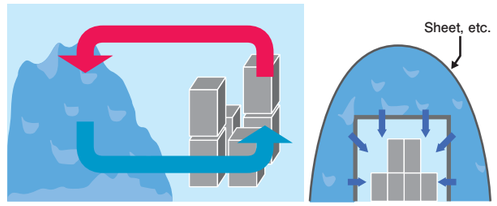
2) Cold Air Circulation Method by Direct Heat Exchange

Air is circulated between a snow and ice storage device for cooling the warehouse or room being cooled using a ventilator.



3) Natural Convection Method (Snow Chamber/Ice Chamber)

Cold from a snow and ice storage device or from snow stored in the cover over the warehouse is passed naturally through the warehouse by convection.



■Main Companies Using Snow and Ice Thermal Energy in Hokkaido

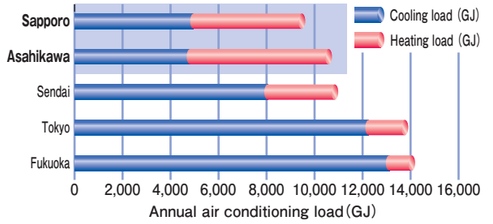
Established by	Facility Name	Warehouse Capacity (t)	Cooling source
Tsuchiya Dairy Equipment MFG. Co.	Curlplex Obihiro Ice Shelter	295	Snow/Ice
KOKUSAKU KENSETSU Corporation	Asahikawa Toyooka Center Building	330	Snow
Honda Motor Co., Ltd.	Administrative building	250	Ice
SHIMIZU CORPORATION Hokkaido Branch Office	Single occupancy housing Amitie Miyanomori	40	Snow
Seiko Epson Corp. Sapporo SoftCenter	Snow-cooled air-conditioning systems	70	Snow
Daika	Low temperature ice chamber storage facilities	302	Ice
Denso Hokkaido Corporation	Cold water exchange style snow cooled air-conditioning	327	Snow
Tokyo Regional Civil Aviation Bureau, New Chitose Airport Office-CENTRAL LEASING SYSTEM Co., LTD.	Snow mountain cooling supply systems	74,400	Snow
Amino Up Chemical Co., Ltd.	Eco-House snow cooled air-conditioning systems	200	Snow
TOYOTA MOTOR HOKKAIDO, INC.	Snow and ice air conditioning systems	500	Snow
Hokkaido Maeta Co., Ltd.	Snow cooled air-conditioning experimentation and research facilities	90	Snow
Honma Shozo Shoten Co., Ltd.	Honma Shozo Shoten Rokugou Souko	150	Snow
MAKINO KOGYO Co., Ltd.	Pipe arch type snow and ice warehouse	256	Snow/Ice

* 1 ton of snow can save 10 liters of petroleum and prevent 30 kg of CO2 emissions.
(Source: Hokkaido Bureau of Economy, Trade and Industry)

Controlling Air-Conditioning Energy

Hokkaido has a short summer with low humidity, and less energy is needed for cooling systems compared to Honshu. Building insulation has been improved considerably, reducing energy requirements for heating in the winter. This has led to a dramatic decrease in the energy used for cooling, particularly in manufacturing industries and data centers where a large amount of heat is generated by devices year-round.

■Comparison of the Annual Air Conditioning Load



(Note) ・These figures are for a 10,000m2 factory where 70% of the area is cooled. *Results calculated as of January 2013
・Air conditioning load for thermal insulation performance is calculated at the same 50 mm level as in Hokkaido, and the thermal insulation performance value for mainland cities becomes smaller. Therefore, if the same low-thermal insulation specifications that are commonly used in Honshu are factored in for Hokkaido calculations, it can be seen that the heating load value in Honshu is larger than that of Hokkaido.
・In industries where heating equipment is used, the heating load becomes lower than that shown in the figure, but the cooling load increases.
*This is an example calculation shown for reference purposes only.
(Source: Hokkaido Electric Power Co.)