

Energy Efficiency in Japan

A brief overview by the Royal Danish Embassy in Japan

Energy efficiency is high on the political agenda in Japan. This is driven by the increase in energy prices and the need to reduce GHG-emissions with 46 pct. by 2030. Japan is importing around 90% of its energy, and thus higher prices on fossil fuels and a weakened yen has led to rapidly increasing energy costs for the country.

Larger city areas like Tokyo are repeatedly exposed to power crunches, when supply can hardly meet the demand. Every summer and winter in peak season the access to energy is constrained. Several times during the peak season the Tokyo Metropolitan Government urges its citizens and companies to save energy (stop heating or cooling) as the city otherwise will face brown- or black-outs.

The Royal Danish Embassy in Japan will focus on supporting the development of energy efficiency in Japan and to market world leading solutions in EE. The purpose of this initiatives is to create platforms for Danish businesses in energy efficiency by establishing direct contact to key Japanese stakeholders including political decision makers and commercial partners.

1. Commercial buildings and private housing need to increase energy efficiency and new regulation is on its way

This is crucial due to several reasons:

- a) Buildings are created with an expected average lifespan of 32 years
- b) The reuse of materials is non-existing
- c) A historical lack of focus on energy efficiency in the regulatory framework
- d) The majority of buildings have very little insulation, windows are one layered and in general, smart heating/cooling solutions of larger buildings are rare.

The Japanese government created a program aiming at incentivizing municipalities to decarbonize and contribute to the ambitious net-zero target by 2050. The municipalities can apply to become a net-zero by applying for a national budget to implement specific decarbonising initiatives.

2. Embassy renovation as a showcase for efficiency in buildings

The Embassy in Tokyo was created by the well-renowned architect Fumihiko Maki in 1979. The expected lifespan of it is 30 years, and is about to undergo a substantial energy renovation. The Embassy is a “climate front post” and will through the renovation contribute to the Danish Ministry of Foreign Affairs’ ambition of becoming one of the five most sustainable foreign services in the world. The renovation of the embassy could create a platform for Danish business to promote state of the art solutions and display them to the Japanese market.

3. District heating in Sapporo

The district heating in the city centre of Sapporo in Hokkaido was constructed in relation to the preparation for the 1972 Winter Olympics. Currently, the city considering renewing their district heating system, and the authorities have specifically asked the embassy to facilitate presentation of state of the art solutions in district heating based on Danish experiences.

In addition, Sapporo is a relevant city and prefecture when it comes to water and energy consumption for larger farming (dairy) and brewing operations. Hokkaido is a hub for offshore wind. Expanding a municipal collaboration with Sapporo would create a unique platform for Danish companies in district heating as well as water and energy savings solutions.