



Source : englishrussia.com

# Krasnoyarsk, Russia

---

APEC LOW CARBON MODEL TOWN





# 1. Background Overview

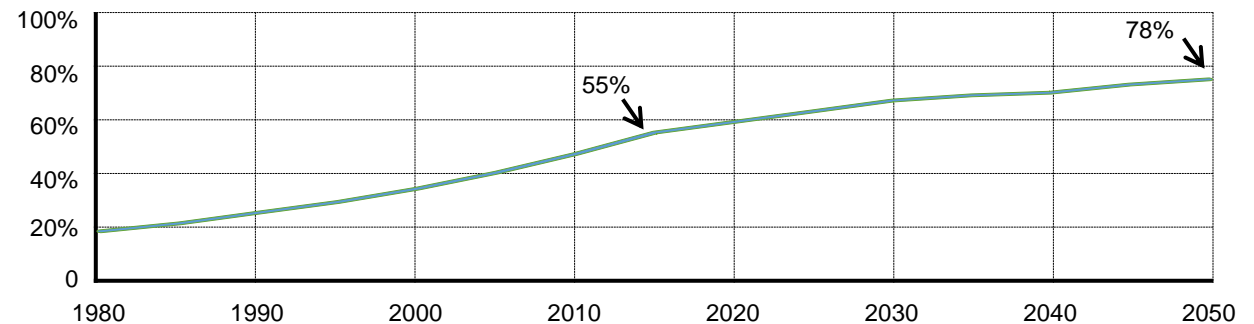
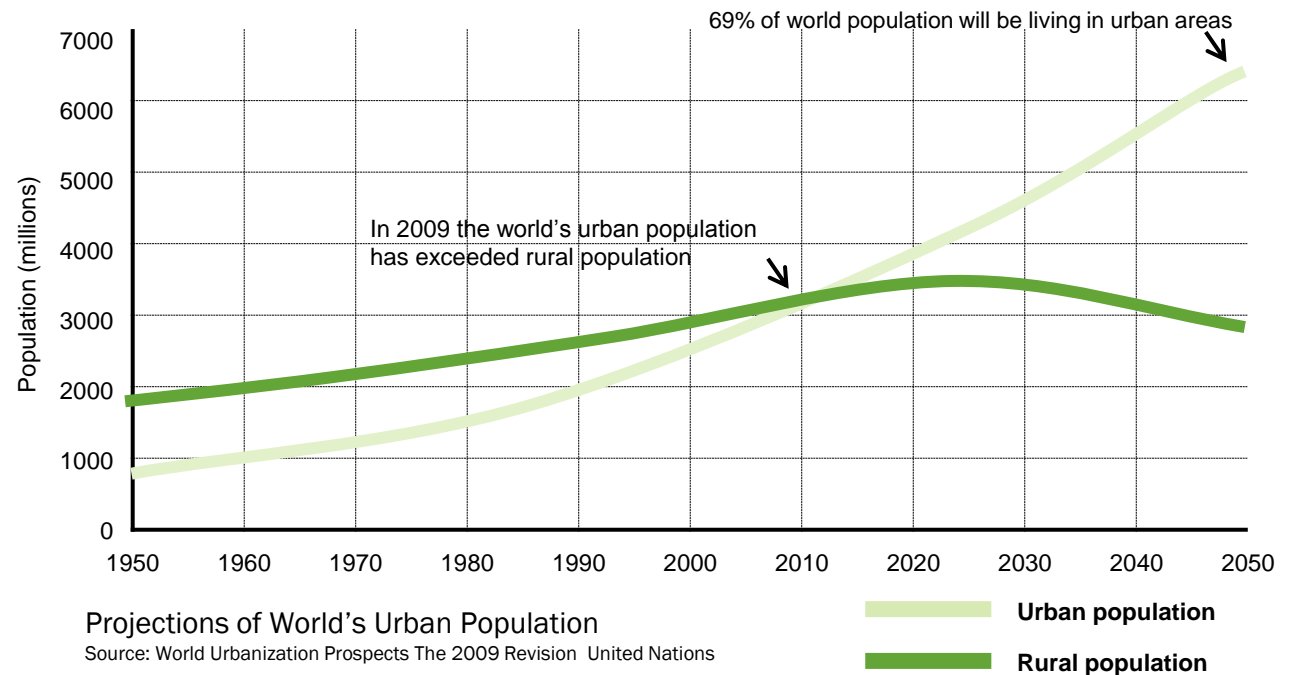
Projections show that 69% of the world's population will be living in urban areas.

The urban population rate of Russia was 20% in 1980 and it has grown to 55% by 2015. Projections show that Russia's urban population rate will reach 78% by 2050.

Urban population rate = urban population / total population

Urban population is determined in accordance with the definition of "urban areas" set forth by each country.

*By 2050 **78%** of the Russian population will live in cities.*



Projections of Russian's Urban Population Rate

Source: World Urbanization Prospects The 2011 Revision United Nations

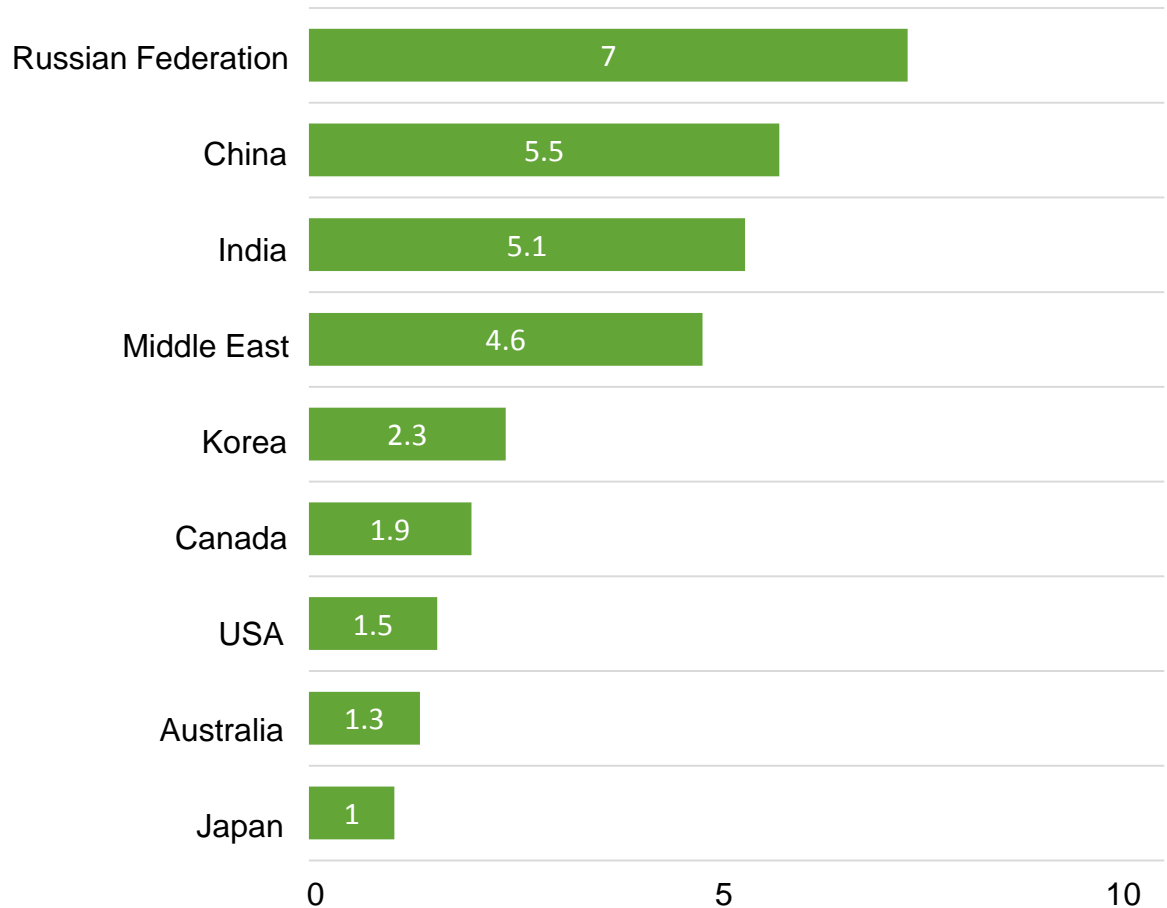


# 1. Background Overview

Energy consumption per GDP of Russia is 7 times that of Japan and 4.6 times that of USA.

It is necessary to reduce future energy consumption with continuing GDP growth in GDP.

*Energy consumption per GDP of Russia is **7 times** that of Japan.*



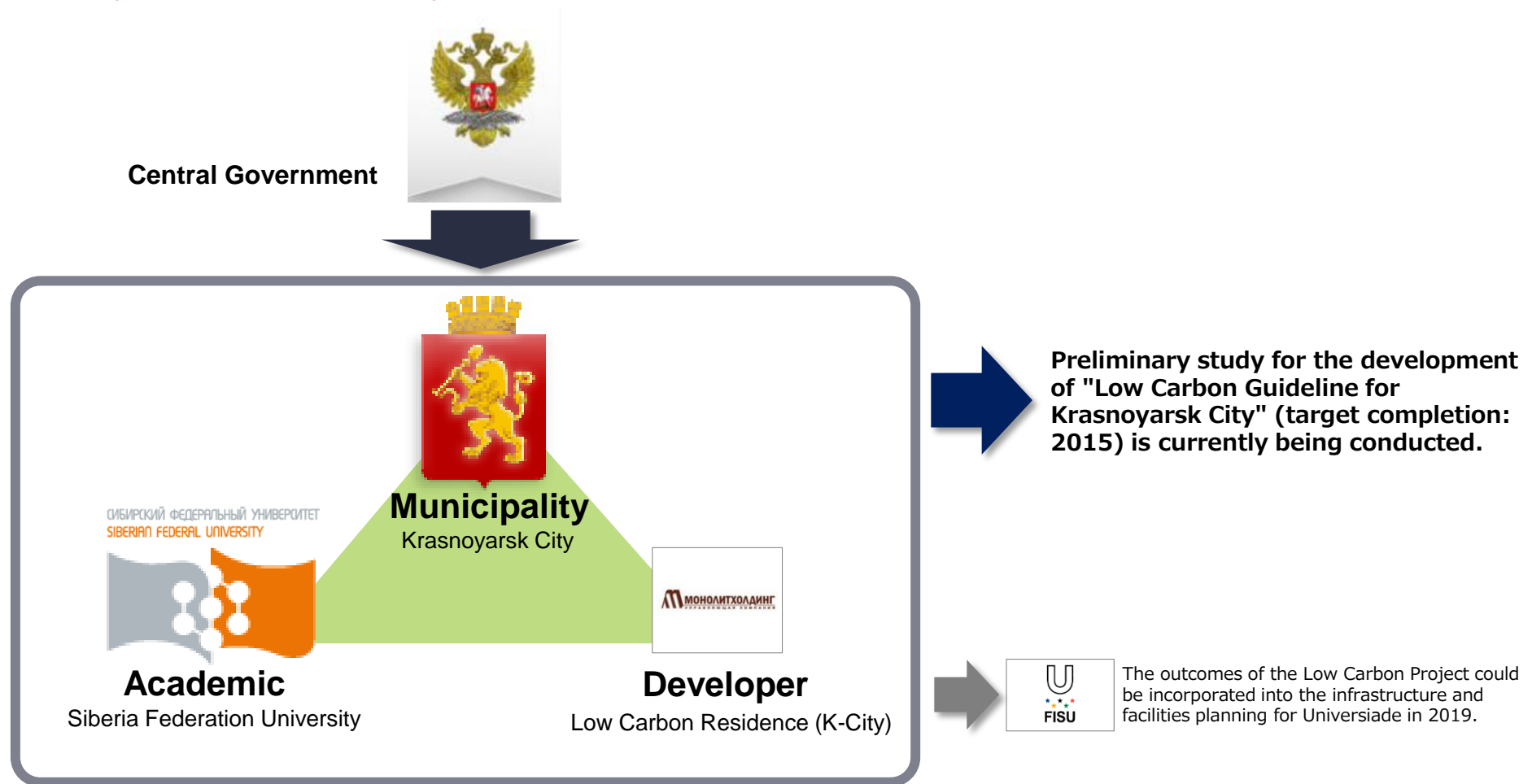
Comparison of Primary Energy Consumption per GDP  
(as a ratio to Japan's consumption rate)

Source: IEA, 2012 Key World Energy STATISTICS



# 1. Background

*The formation of an implementation framework for Low Carbon Town development in Krasnoyarsk is underway.*





## 2. Krasnoyarsk City Overview

# Information about the city

Krasnoyarsk is the largest industrial and cultural centre of Eastern Siberia, and capital of Krasnoyarsk Territory.

The total area of the city is **47 000 hectares**.

The population of Krasnoyarsk is around **1 000 000 people**.

## Location







## 2. Krasnoyarsk City *City Landscape*

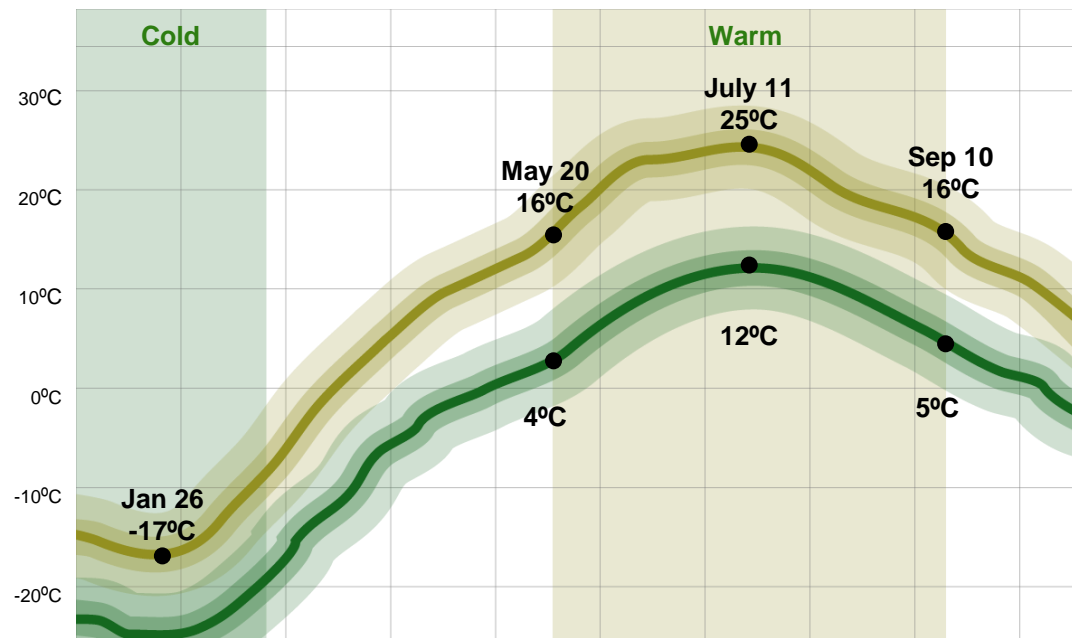




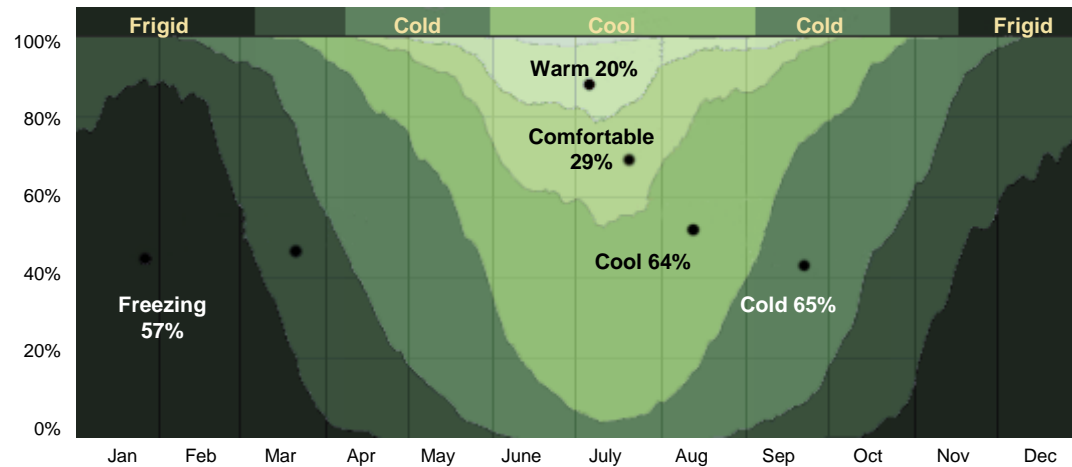
## 2. Krasnoyarsk City

### *Climatic conditions*

More than 60% of the days between November and February are frigid cold.



The average minimum temperature is **-26°C** and the highest average maximum temperature is **-17°C**.  
The summer temperature ranges are 12°C ~25°C.



Most days between March and April, and in October have freezing temperatures; May and September have mostly cold days. Between Jun and August, 60% of the days have cool temperatures and the weather is warm or comfortable for the other days.

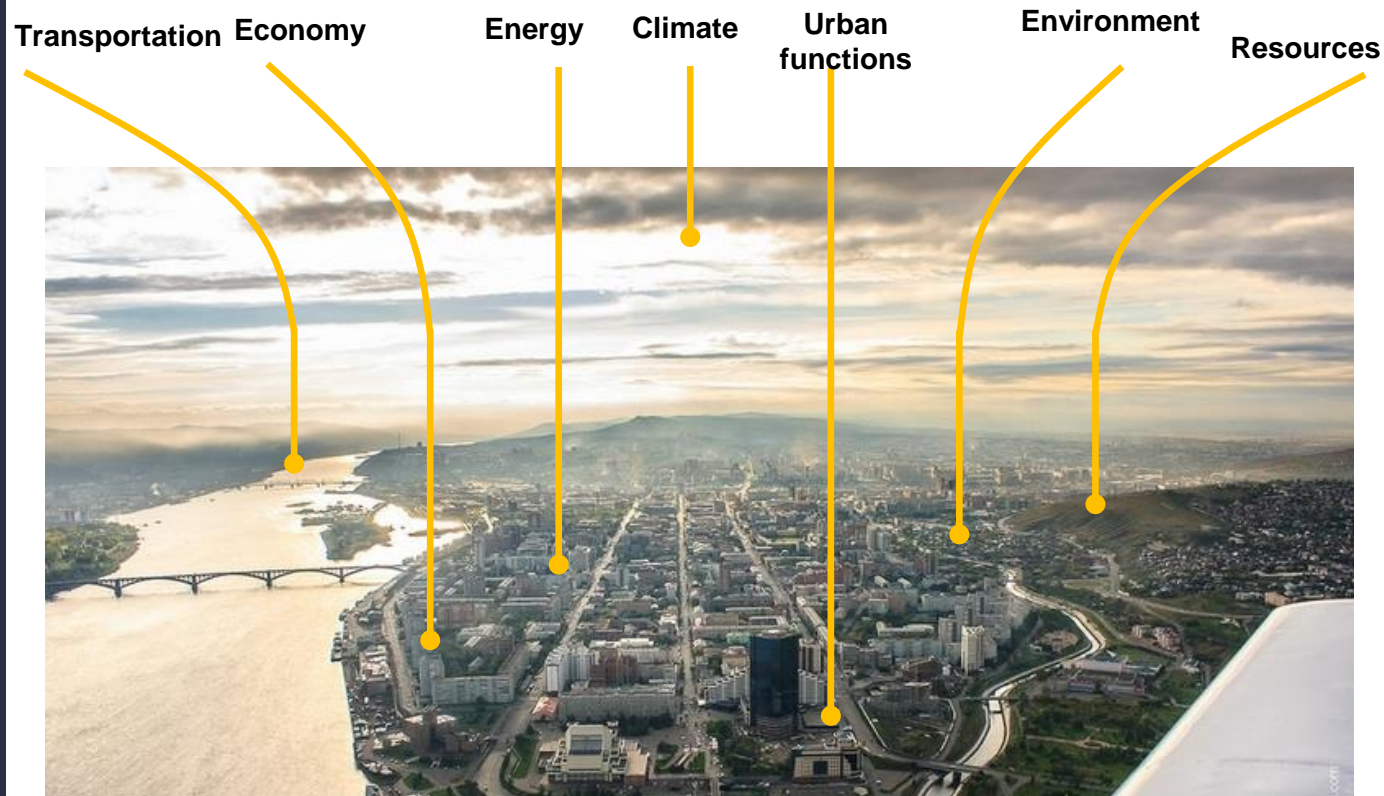


## 2. Krasnoyarsk City

### *Issues and Challenges*

Krasnoyarsk City is planning to develop strategies for the realization of “Low Carbon Town” which could comprehensively solve various issues related to urban growth.

Promotional efforts for conducting a Low Carbon Model Town pilot project in a ***cold climate*** is currently underway.





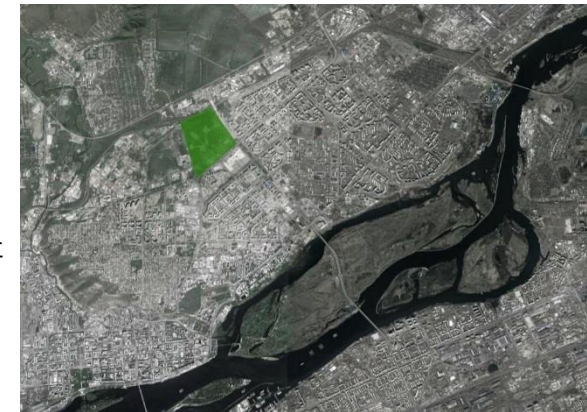


# 3. Leading Examples

## Leading examples of low carbon town development in Krasnoyarsk City



Location:	Krasnoyarsk, Russia
Developer:	Monolith Holding
Site area:	50 ha
Construction area:	560 000 sq.m.
Land use:	Residential (6,000 households) Primary school, Kindergarten as Low Carbon Residence Project
Total cost:	1 billion USD
Financing:	Pre sales, Sperbank
Status:	Phase 1 construction started
Completion:	within 7 years





*Energy savings up to **70%***



Energy status is considered to be strategically important for Russia and depends on energy sales to the foreign market, as well as on domestic consumption. Low Carbon Town (or Smart City) technologies are designed to bring energy status to the next level and improve the quality of life of citizens. Currently, smart technologies in Russia are in their initial stage, and Krasnoyarsk city has a unique chance to become the first example of embodiment of such technologies in Russian Federation.

The Low Carbon Town technologies create a lifestyle of high quality and advanced energy-saving communities. Our goal is to create not only the first smart community in Russia, but also an example of best practice for all the world's regions with cold climates.



# 3. Leading Examples

*Leading examples of low carbon town development in Krasnoyarsk City*



Urban eco efficiency



Value Increase



Human  
Oriented



Nature  
Friendly



Healthy & Safe  
Environment

Comfort and Healthcare

Convenience



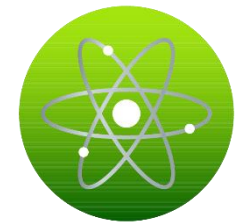
Load



Energy Efficient  
Buildings



Energy Efficient  
Infrastructure



Energy Efficient  
Lifestyle

Energy and Resource Conservation



# 3. Leading Examples

## *Leading examples of low carbon town development in Krasnoyarsk City*

## *Energy Reduction Goals*







## 4. LCMT Phase 6

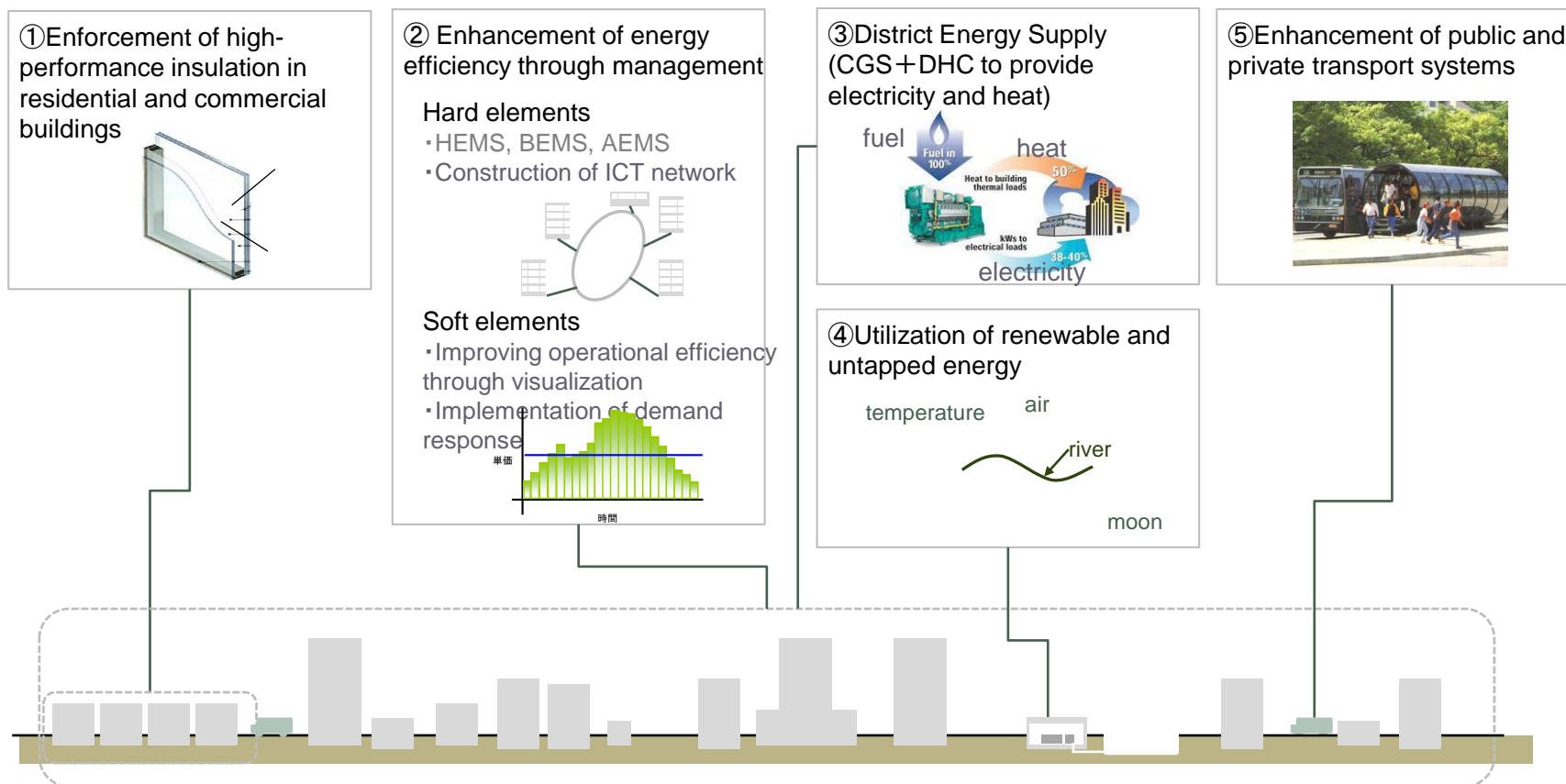
***We hope to get your support for the implementation of APEC LCMT project in Krasnoyarsk!***

- Russia is one of the APEC economies with the highest energy consumption. The main challenges are building energy consumption and energy supply efficiency.
- Low Carbon Residence development is making progress (Development of K-City).
- An industry-academia-government collaboration for the development of Low Carbon Town is being created.
- Since it will be the first-time the LCMT project is conducted in an intensely cold climate, the outcomes from the study will give new perspectives and serve as valuable examples for APEC economies.
- The outcomes of the Low Carbon Project could be incorporated into the infrastructure and facilities planning for Universiade in 2019.



# 4. LCMT Phase 6

## Proposal for Low Carbon Town Development Plan for Krasnoyarsk City





Source : [englishrussia.com](http://englishrussia.com)

# Krasnoyarsk City

---

