

# IN THE HEART OF EUROASIA

**KAZAKHSTAN**

UZBEKISTAN

KYRGYZSTAN

TURKMENISTAN

TAJIKISTAN

## 1. BIGGEST INVESTMENT PROJECT

- 4 000 000 000\$ total investment
- 174ha construction site
- 1 000 000 m<sup>2</sup> GFA
- The biggest sphere in the world

## 2. FIRST SUSTAINABLE PROJECT

- Thermo-heating
- Solar energy supply
- Breem certified
- Automatic vacuum waste collection



**GDP \$340Bn**  
8,1% average growth rate



**POPULATION**  
**60 000 000**

POPULATION OF KAZAKHSTAN – 17 000 000



**EXPO**  
• Future  
Astana K



# Regulatory and legal framework in Kazakhstan



- \* Law on energy efficiency and conservation from January 1, 2014
- \* Energy conservation Program 2020
- \* Regional plans of Energy conservation of Kazakhstan's cities

# Program goals and objectives



## **Goal:**

- creating favourable conditions for lowering the energy content of Kazakhstan GDP by reduction of energy consumption and ineffective resource usage.

## **Objectives:**

- Upgrading energy efficiency of domestic industry;
- Curbing losses of heat in heating and electrical supply;
- Active nationwide promoting of energy efficiency;
- Stimulating energy conservation and efficiency;
- Means of motivating energy supply companies;
- Preparation of specialists in energy efficiency;

# Regional plans of Energy conservation in Astana (basic principles):



Energy conservation in an industrial and non industrial, constructional and transportation sectors

Energy – manufacturing and classification of Energy resources

Energy conservation in a budgetary area

Energy conservation





# Energy conservation and efficiency projects in Astana, Kazakhstan



Integrated promotion of energy conservation and efficiency in Astana by the Government



# Key instruments of energy conservation and efficiency advancement



- Focus on **environmental** and social (improved quality of life) benefits derived from reducing greenhouse emissions as a result of energy conservation.
- Supporting wind energy development (2004-2011)
- Energy efficiency in public heating supply (2007-2013)
- Efficient design and construction (2011-2015)
- Supporting energy efficiency in housing services of small towns (2013-2014)
- Energy efficient public lighting (2012-2017)
- Supporting sustainable transport ( 2011 – 2016)
- Promoting low carbon technologies for sustainable urban development (2015 – 2019)

# Projects on energy efficiency and renewable energy sources:

Implemented since 2000

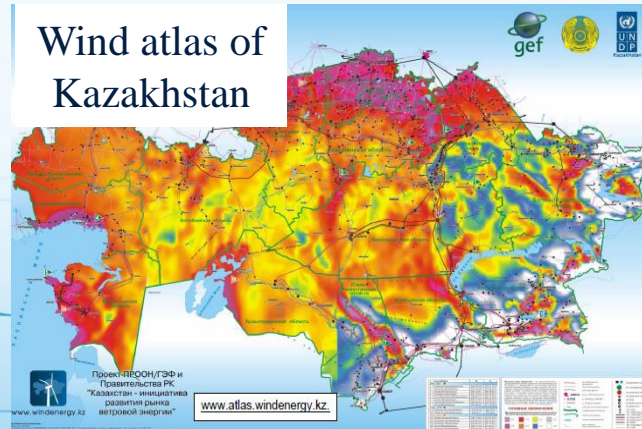


**Project on Public heating (2007-2013 )**

**Wind energy project (2004-2011)**



**Wind atlas of  
Kazakhstan**



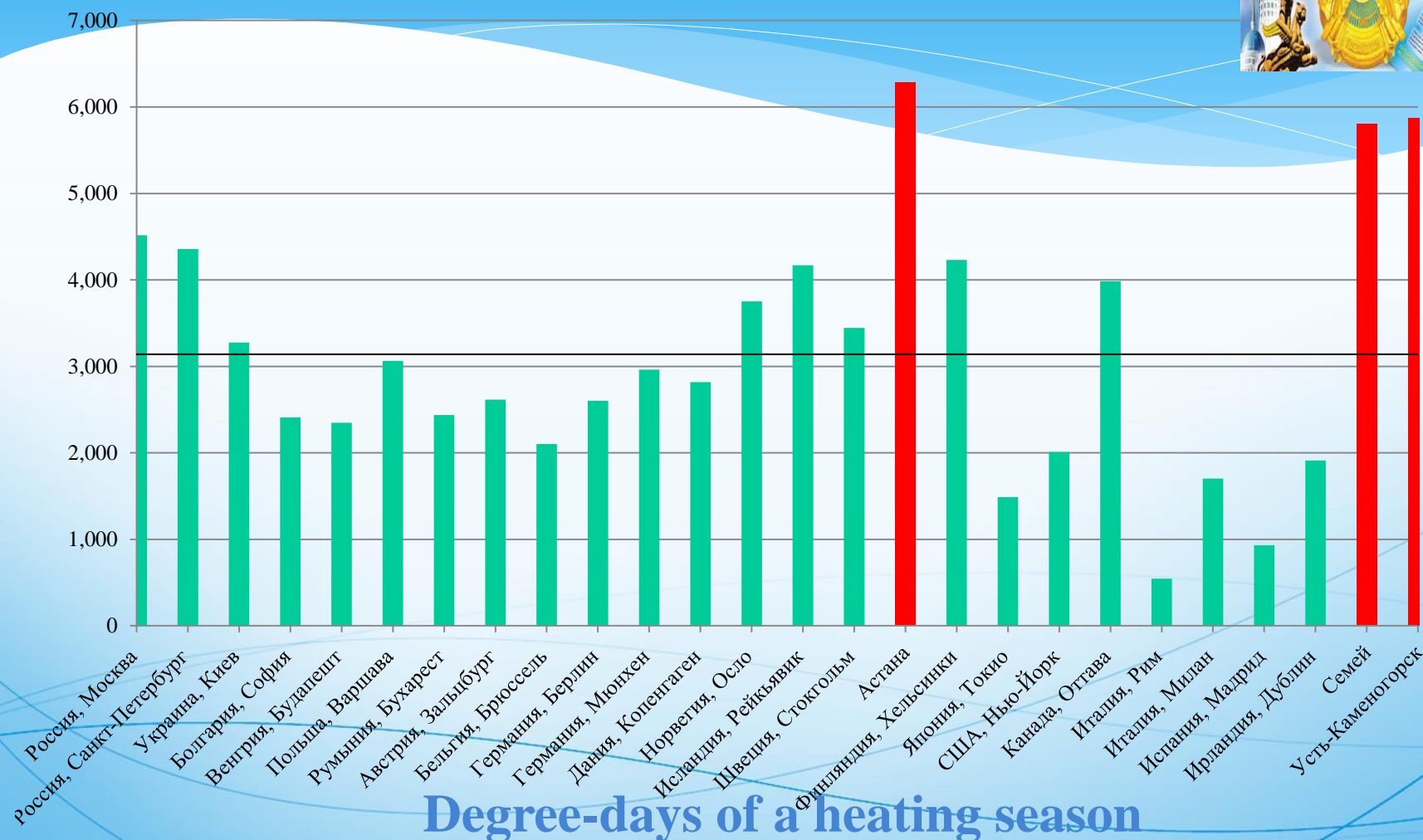




Projects aim to reduce greenhouse gases emission through developing and implementing organizational, financial and technical measures in public housing sector and construction.

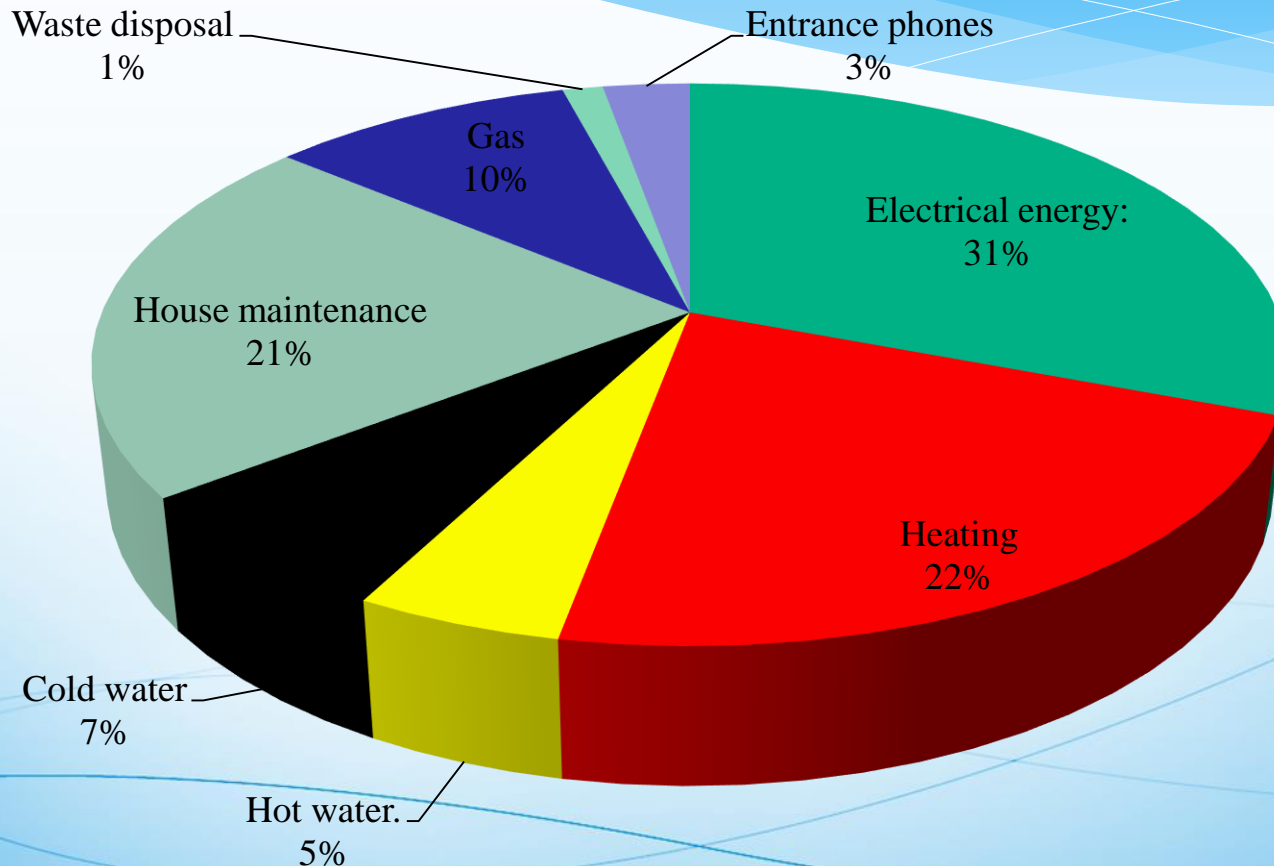


# Heating energy demand



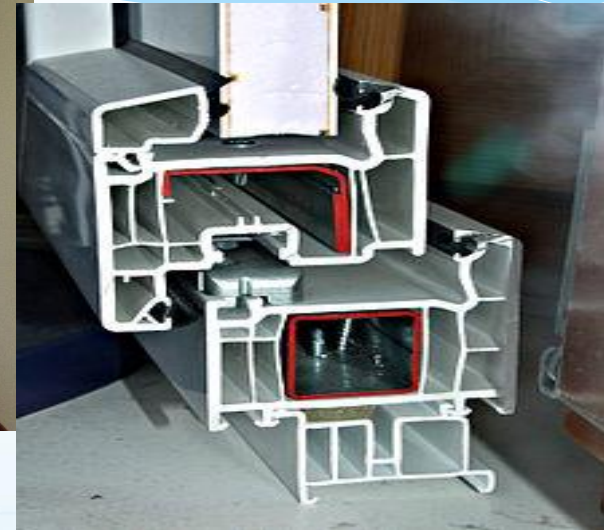
Degree-days of a heating season

# Payments for public utilities (Astana)





# Additional thermal protection of constructions and energy saving transparent materials



Outside wall thickness of 1-5 levels – 730 mm,  
above 5<sup>th</sup> level– 600 mm (extra thermal foldings  
Thermal isolation of the spaces of staircase and  
lifts across concrete scaffold Extra thermal  
isolation of outer walls of the attic mineral  
insulating material дополнительное утепление

Resistance to heat conductance of  
the above window materials  $R_{Fr}=1,0$   
 $m^2 \cdot C/W$   
(the often used ones have a value  
of 0,59)

Object heating is from heating electrical station, automated heating systems are installed in each section block as well as a common heating monitoring device. Each level has a recuperation system (ventilation devices) Each apartment has its own heating monitoring device. Thermostats installed in heating radiators. Central computer for dispatching purposes. LED lights in public places

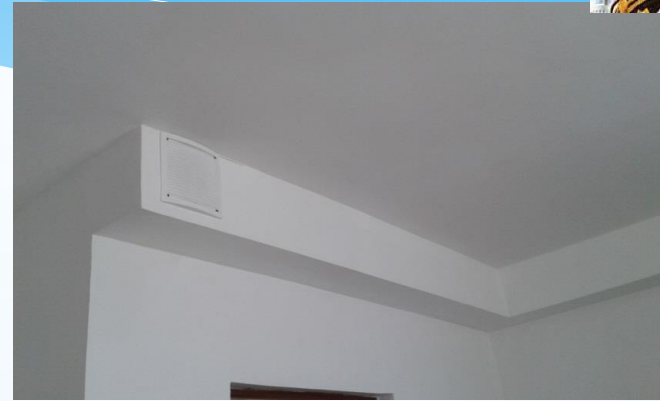




# System for heat recuperation from outbound air



Recuperation devices  
(ventilation aggregates)



Air pipes in each apartment



Controlling and regulation in  
apartments



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Astana Kazakhstan  
PARTNERSHIP



# EXPO-CITY



ENERGY HALL

NATIONAL PAVILION  
OF KAZAKHSTAN

COMMERCIAL  
AREAS

THEMATIC  
PAVILIONS

ART CENTER

INTERNATIONAL  
PAVILIONS

AUDITORIUM



# EXPO IN A NEW ERA

<b>2000</b>	Hannover, Germany	<i>«Humankind - Nature - Technology»</i>
<b>2005</b>	Aichi, Japan	<i>«Nature's Wisdom»</i>
<b>2008</b>	Zaragoza, Spain	<i>«Water and Sustainable Development»</i>
<b>2010</b>	Shanghai, China	<i>«Better City, Better Life»</i>
<b>2012</b>	Yeosu, Korea	<i>«The living ocean and coast»</i>
<b>2015</b>	Milan, Italy	<i>«Feeding the Planet, Energy for life»</i>
<b>2017</b>	Astana, Kazakhstan	<i>«Future Energy»</i>

Starting from 2000  
EXPOs are dedicated  
**to sustainable  
development**



# "GREEN ECONOMY" IN KAZAKHSTAN

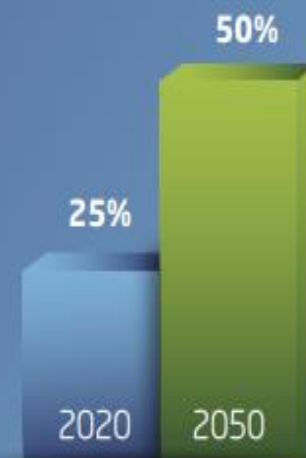
## TARGETS



Renewable energy generation share



Reduction in greenhouse gas emissions



Increase in energy efficiency (compared to 2010 levels)

**Kazakhstan is making an unprecedented investment in building a "Green Economy,"** a state program that supports sustainable economies throughout the region with new technology and key investments.



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# ASTANA EXPO-2017 PARTNERSHIP PROGRAM C

Astana EXPO **partnership program guarantees the best-practice approach** when to understanding of the partners needs and development of customized partnership pro

## Astana EXPO Partnership program is based on the following

### PR&Marketing

- Green energy core problems and solutions
- Marketing campaign in Kazakhstan and abroad
- PR&Marketing before and during EXPO

### Market analysis and new pr

- Regional market behavior ana
- Testing new products and se

### Business opportunities

- Exclusive sales rights
- Largest market in Kazakhstan
- Corporate participation at Astana EXPO
- Meetings with government officials, corporate and official participants of Astana EXPO-2017



Thank you for attention!