



**Ministry of Energy of the Republic of Kazakhstan**


# Renewable Energy Sources Development: Current Issues



# MAIN PROVISIONS OF RES SUPPORT LAW IN THE REPUBLIC OF KAZAKHSTAN

## Support mechanisms for investors

- 1 Guaranteed purchase of all energy renewables at a fixed rate for 15 years
- 2 Fixed rates are subject to annual indexation by the inflation rate and exchange rate of national currency to foreign currencies
- 3 The buyer is Financial Settlement Center (FSC)
- 4 RES producers are exempt from paying services of energy transmitting organizations on transmission of energy
- 5 RES producers are given priority during the transmission and dispatching of electric energy
- 6 Financial settlement of RES imbalances is implemented by FSC
- 7 Investment incentives in accordance with the Business Code of the Republic of Kazakhstan are provided to the legal entities that are engaged in the design, construction and operation of facilities for the use of RES

An aerial photograph of a vast solar farm. The rows of solar panels stretch far into the distance, creating a strong sense of perspective. The sky is a mix of soft orange and pale blue, indicating the time is either dawn or dusk. The overall tone is clean and modern, representing renewable energy.

# Resource Potential of Renewable Energy in the Republic of Kazakhstan



920

billion  
kWh per year

Wind power



3000

Sun hours  
per year

Solar power



62

billion  
kWh per year

Hydropower

# Indicators of RES Sector Development 2016

**50** RES facilities  
up to 2020



WPS  
**100** MW



HPS  
**142** MW



SPS  
**58** MW

**300** MW  
Total capacity

# 2020

**103** RES facilities  
up to 2020



WPS  
**960** MW



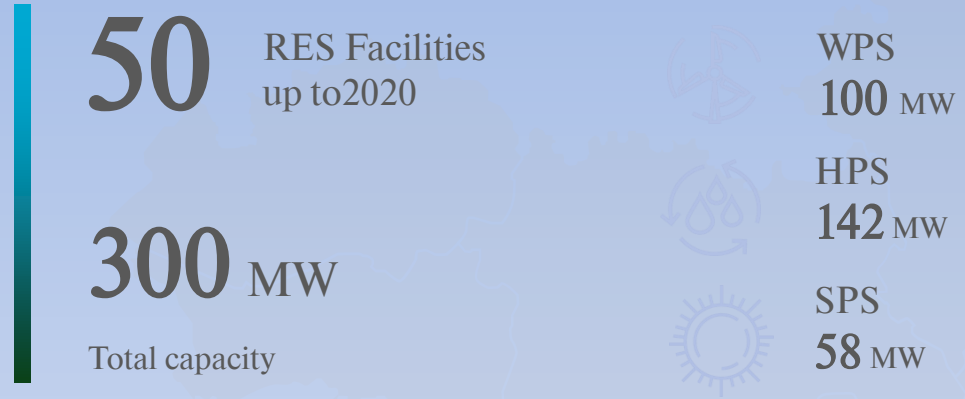
HPS  
**290** MW



SPS  
**750** MW

**2000** MW  
Total capacity

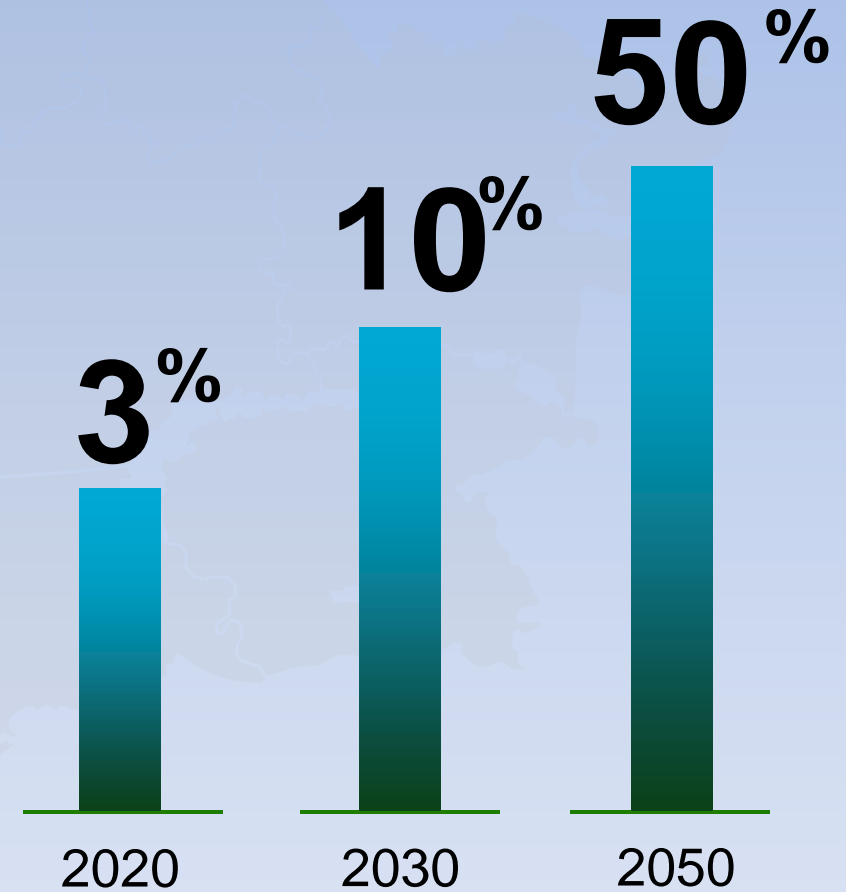
# 2016



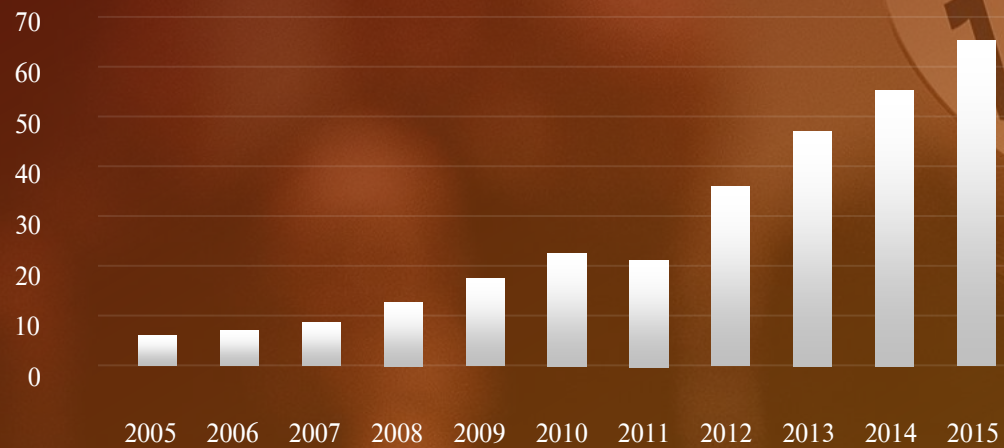
# 2020



## RES share in the total electricity production



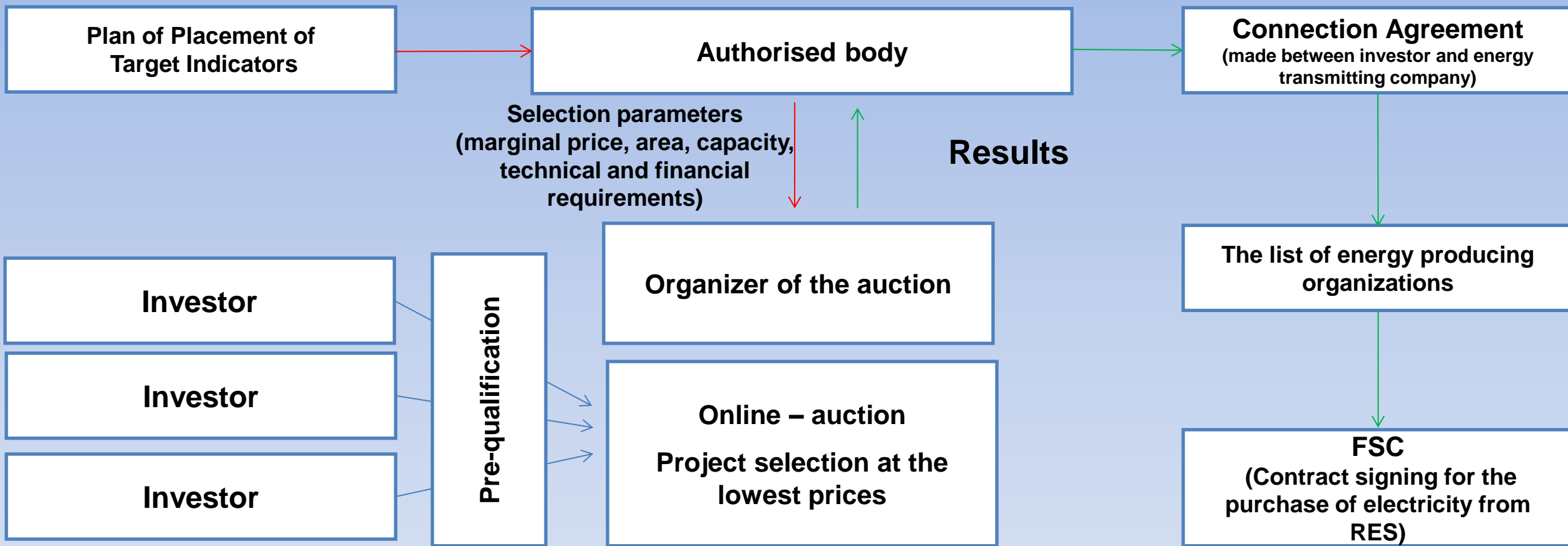
## The number of countries using the auction method of RES support



Today 67 countries working by the auction method of RES support

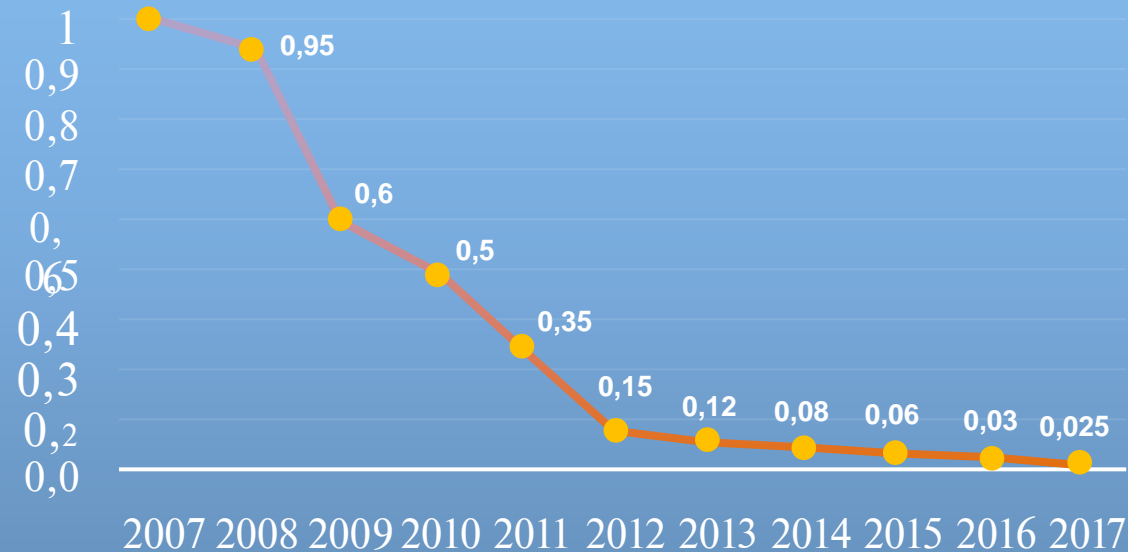


# The introduction of auction mechanism in the further development of RES

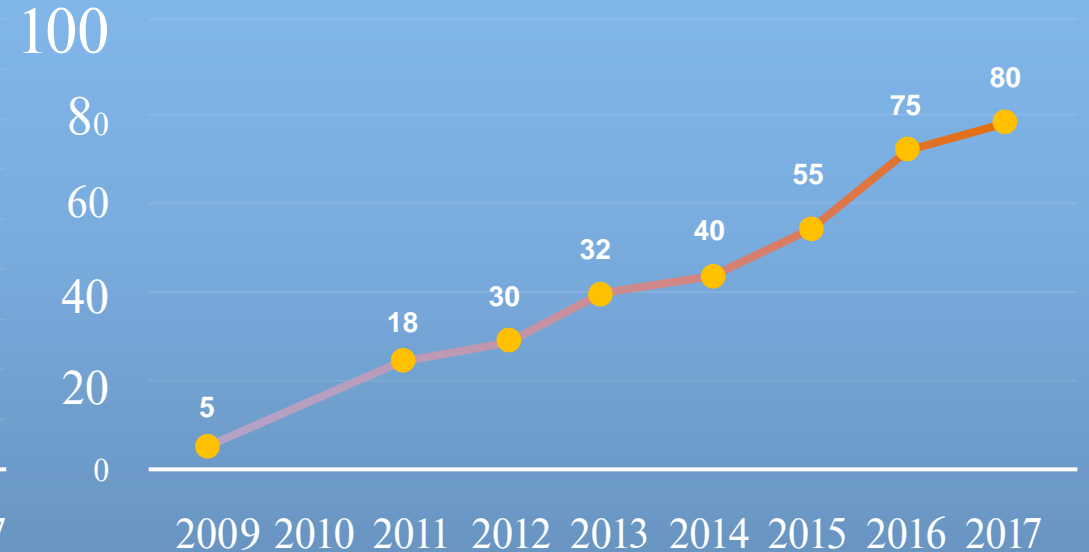




The rates for solar generation,  
\$/KWh



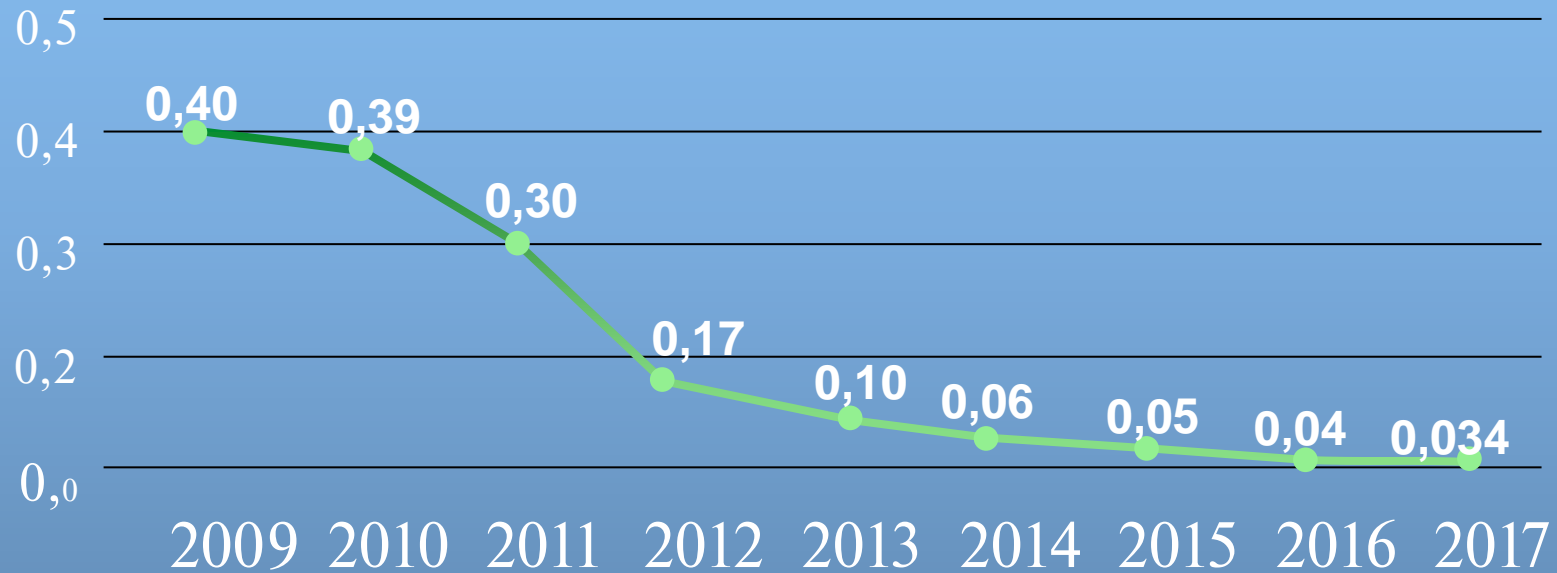
The commissioning of new solar capacity,  
GW



Over the last 10 years the cost of solar energy declined from 1.0 to 0.025 dollars.  
USA.

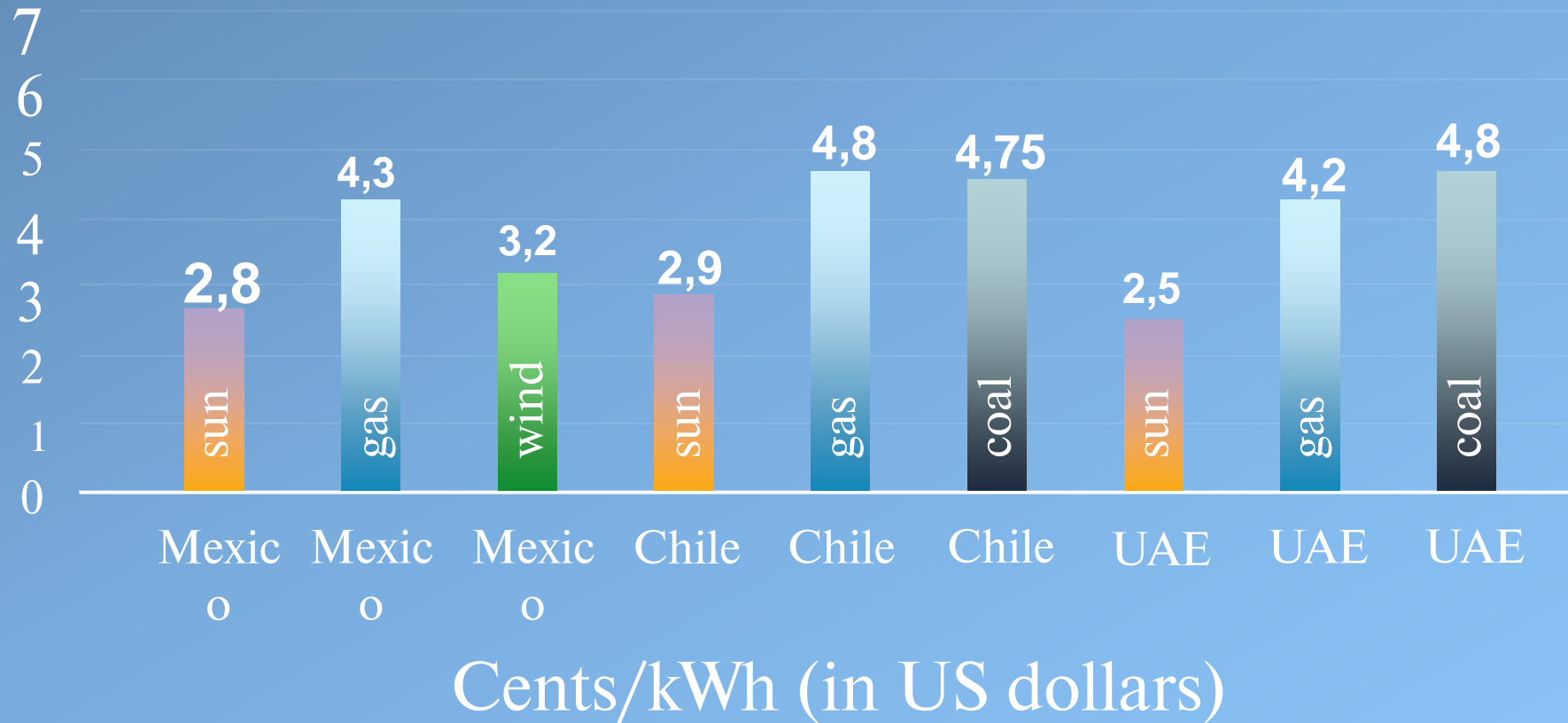
This was achieved through economies of scale, reduction of technology costs and transition to market mechanism - auction.

## The price of wind energy, \$/kWh



The price of renewable energy may be lower than the price of new power plants on coal and gas

## THE RESULTS OF THE AUCTIONS IN 2016 BY TYPES OF GENERATION



# FURTHER DEVELOPMENT OF RES IN KAZAKHSTAN

Two main issues to be solved:

- 1** To choose and implement the most efficient RES projects and attract the best investors with advanced technologies.
- 2** To reduce the load from RES on the economy of the country.

Thank you for attention!