

# Implementing PPP in renewables

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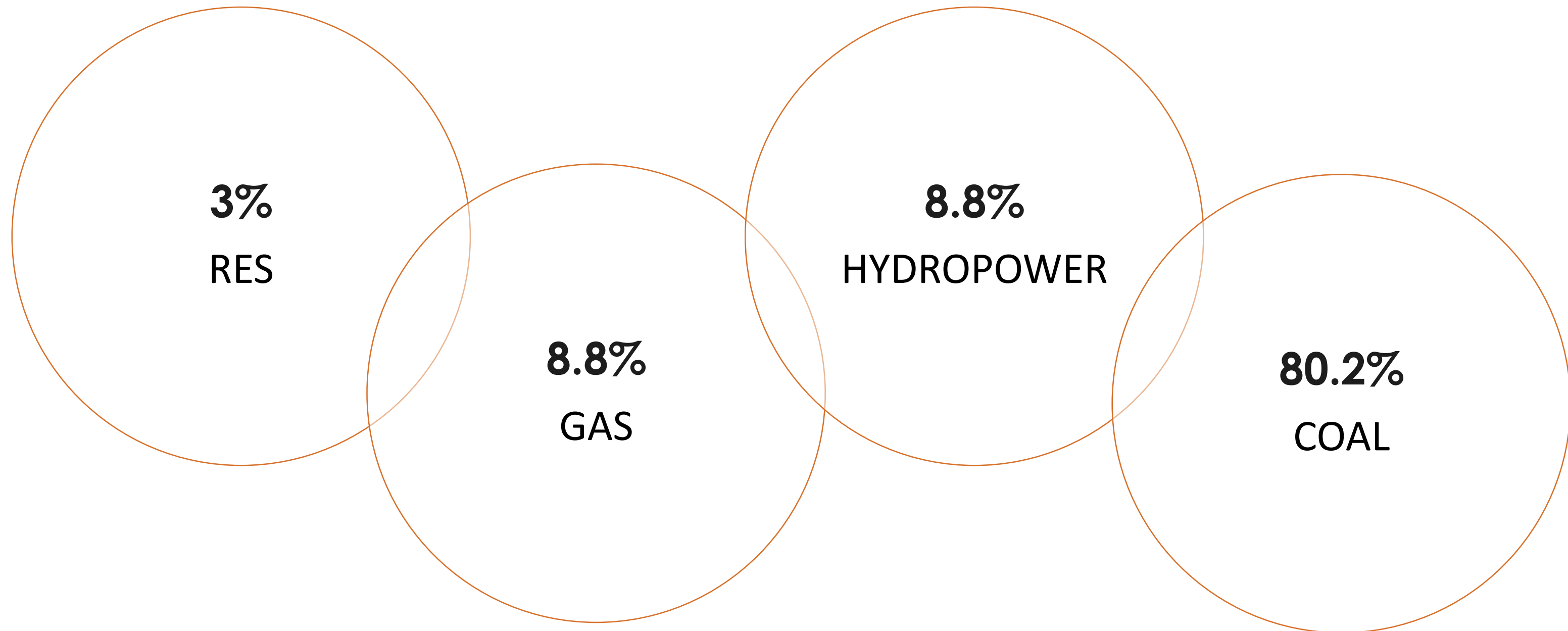
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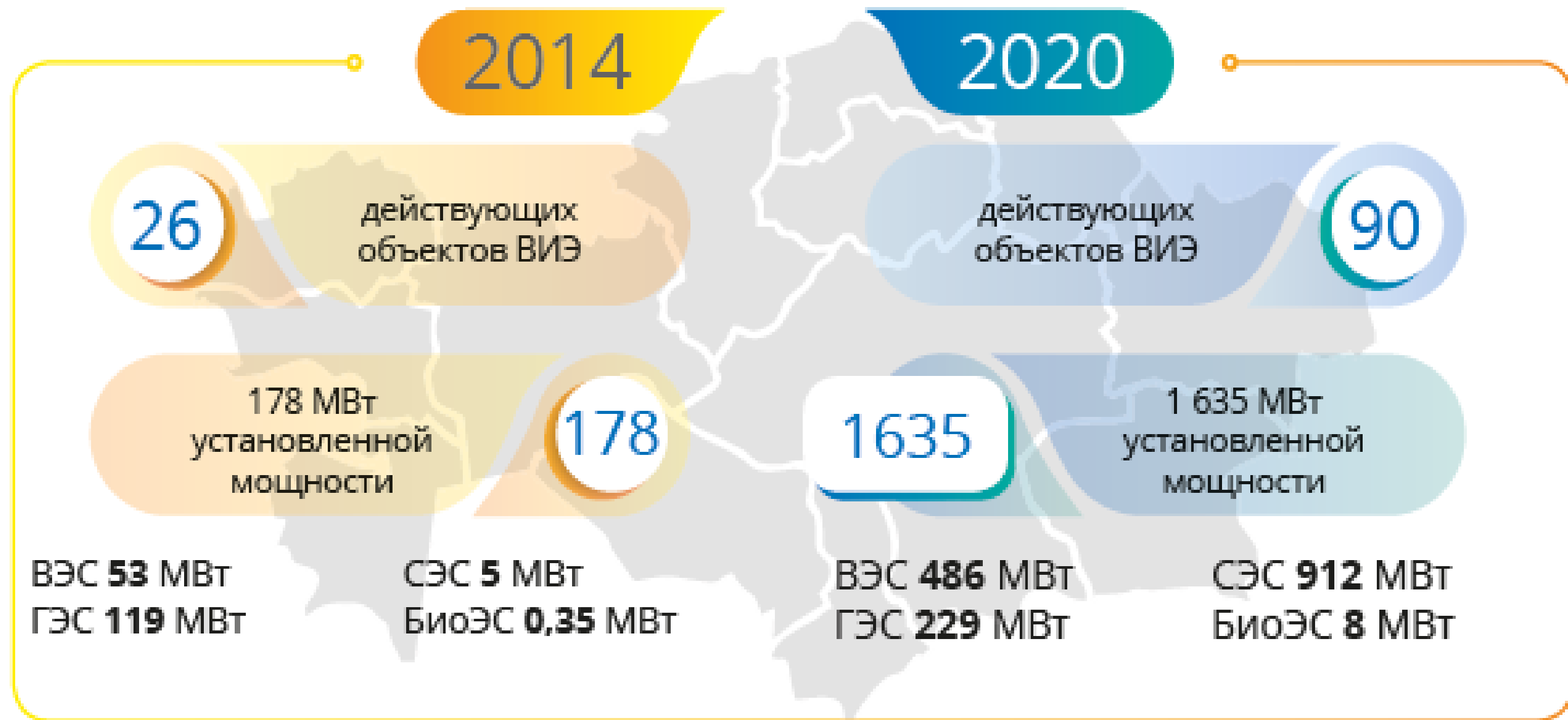


# Introduction

## Structure of electricity production in Kazakhstan



# RES sector



Источник: Информация Министерства Энергетики РК

# Target indicators

## UNFCCC

- Kazakhstan has pledged to reduce greenhouse gas emissions by 15% from 1990 levels by 2020.
- According to the GHG emission projection, a reduction of 5.2% in 2020 has been achieved with the measures taken

## PARIS CLIMATE AGREEMENT

- Kazakhstan should reduce greenhouse gas emissions by 15-25 per cent economy-wide by 2030 compared to 1990 (15 per cent is the unconditional target; 25 per cent is the conditional target, subject to international support).

# Long-term emission reduction targets

## Kazakhstan 2050 Strategy

- Renewable and alternative energy sources should account for 50% by 2050

## Transition to Green Economy

- Renewable energy share - 10% by 2030
- Gas-fired power stations - 25% by 2030
- Reduce CO2 emissions from the power sector by 15% by 2030 (2012 - base year)
- Reduce energy intensity of GDP by 30% by 2030 and by 50% by 2050

## Carbon neutrality 2060

- Electric cars and 10 times fewer emissions
- No emissions from coal and buildings

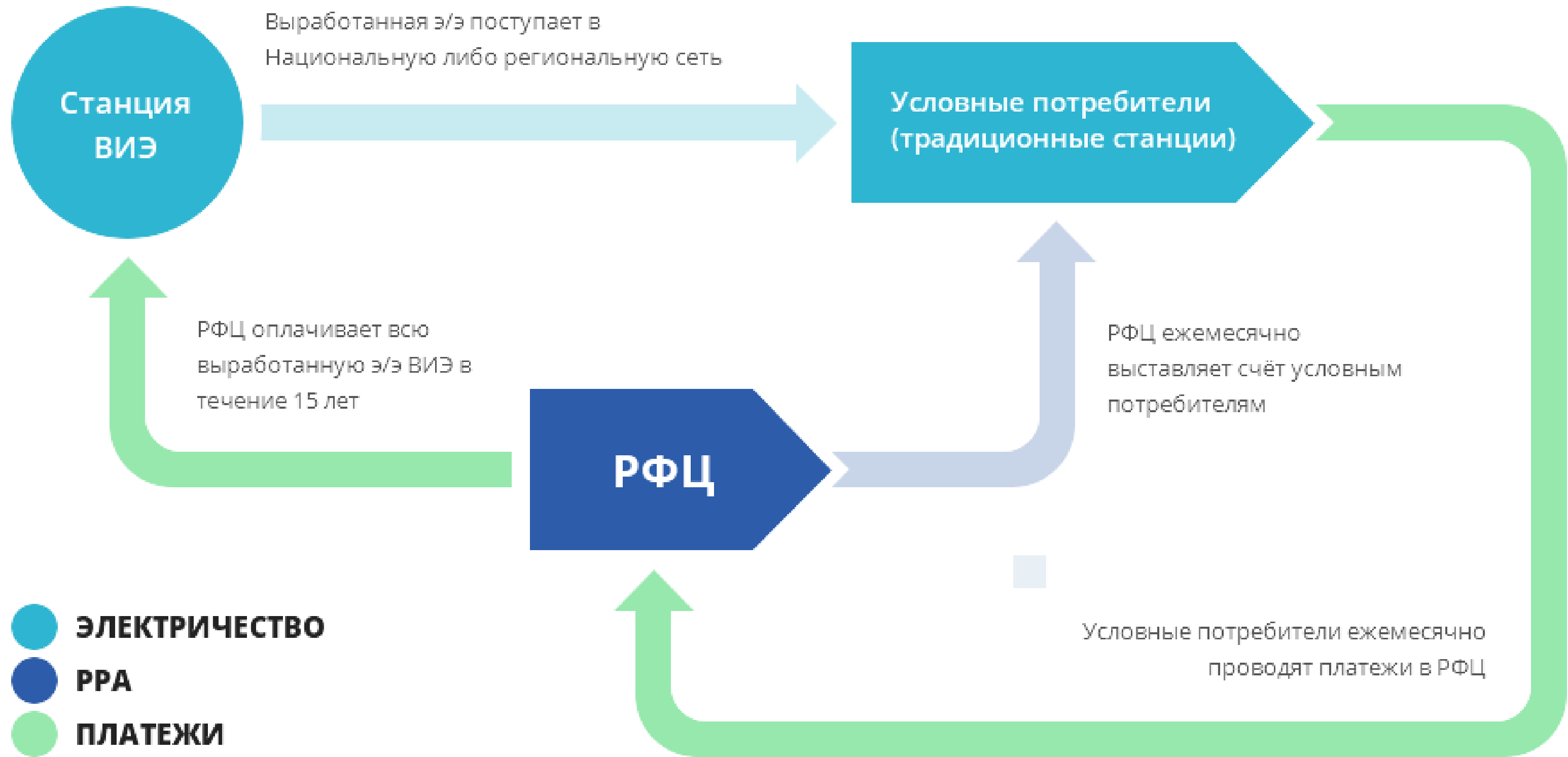


# Renewable Energy Sector Development

- In 2009, Law On Support of the Use of Renewable Energy Sources was adopted to support the use of renewable sources in heat and electricity generation.
- In 2013, a mechanism for state support of the renewable energy sector was launched, which is based on the centralised guaranteed purchase of all electricity produced by renewable energy sources at fixed tariffs.
- Launch of the first RES auction in 2018



# Mechanism of RES sector

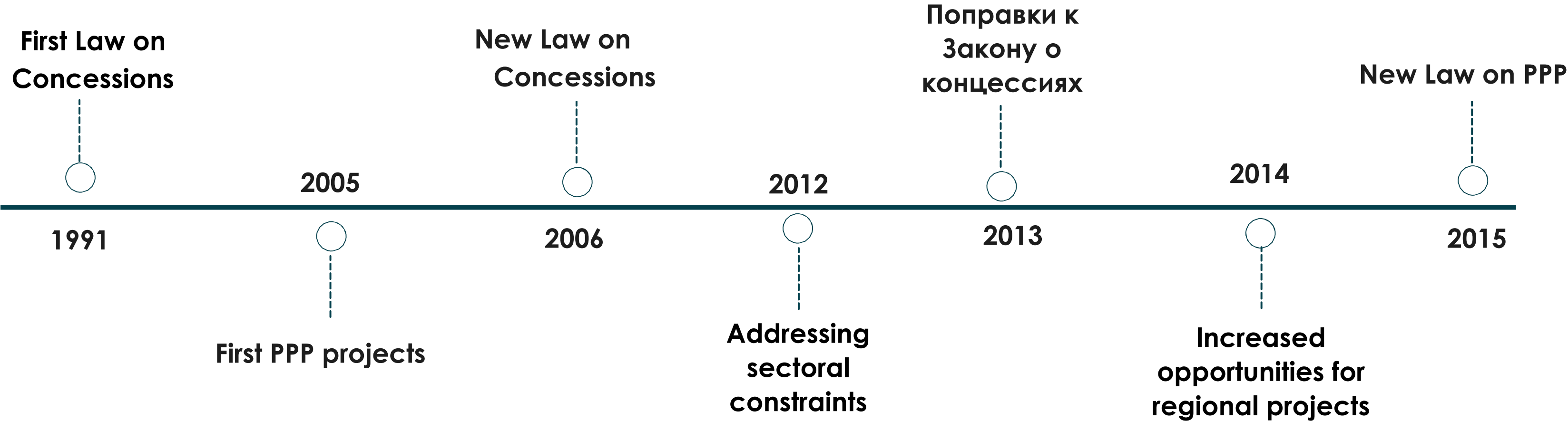


# Results of RES auctions

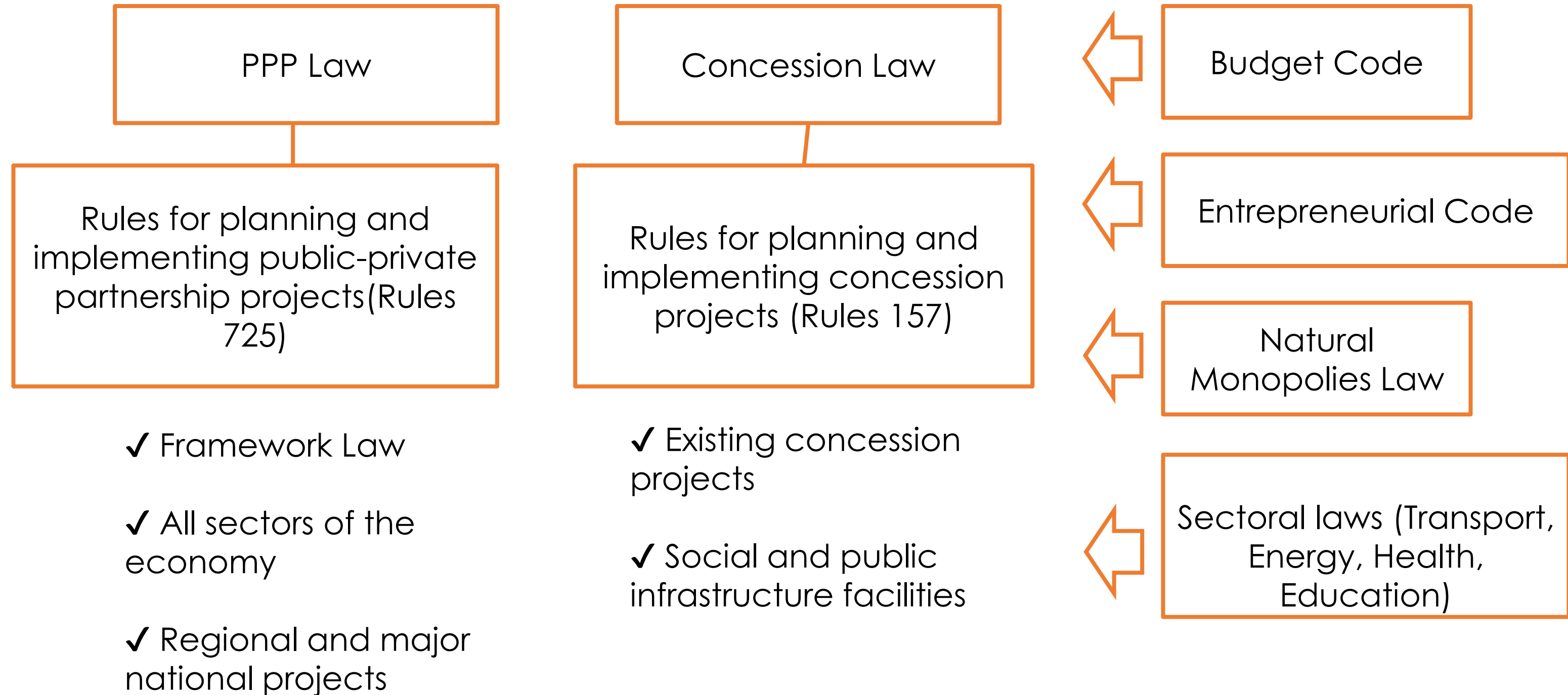
		<b>Wind</b>	<b>Solar</b>	<b>Hydropower</b>	<b>Biomass</b>	<b>Total</b>
<b>Projects selected (MW )</b>	2018 г.	500.85	270	82.08	5	857.93
	2019 г.	108.99	86.5	7	10.4	212.89
	2020 г.	64.95	60	23	-	147.95
	2021 г.	50	20	11.8	5.15	86.95
	Итого	724.79	436.5	123.88	20.55	1305.72



# Development of PPP legislation in Kazakhstan



# PPP legal framework



# Contract PPP



A wide range of PPP contracts

## Lease Agreement

Leasing of state assets

## R&D contracts

New technologies, scientific research

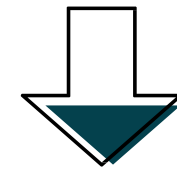
## Life Cycle Contract

From design to operation (road construction, railways, etc.)

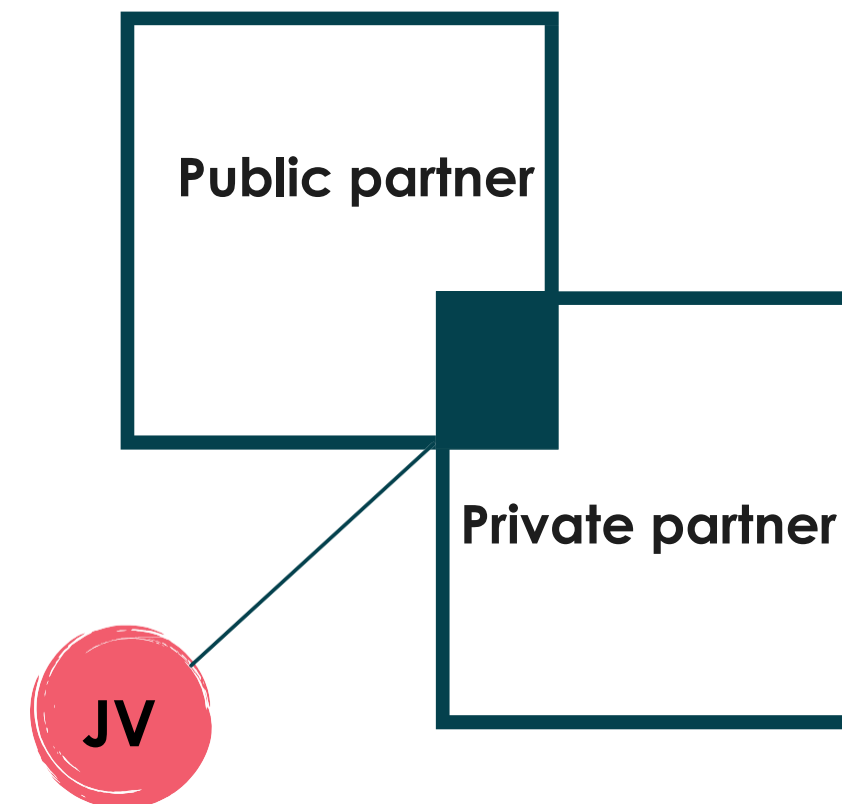
## Service contract

Service and maintenance

# Institutional PPP



## Joint venture



- An alternative to quasi-government activities
- The private and public partner builds up the company's capital for the purposes of:
  - lending
  - Mechanism for withdrawal of the public partner from the JV

# PAYMENTS FROM BUDGET

- Subsidies
- Compensation of investment costs
- Compensation of operating costs
- Remuneration for project management
- Availability fee

# STATE SUPPORT

- State guarantee
- Provision of intellectual property rights
- Provision of in-kind grants
- Co-financing
- Guarantees of state consumption of a certain amount of goods, works and services, etc.

## STATE PARTICIPATION

- Provision of land
- Government support
- Building JV capital
- Provision of engineering and transport communications
- Transfer of state assets, etc.

## PRIVATE SECTOR PARTICIPATION

- Finance
- Management
- Design and construction
- Intellectual property, etc.

## QUASI-STATE COMPANIES PARTICIPATION

- Service support
- Property transfer
- Investment attraction
- Services provided by technology parks, business incubators, etc

# Status quo

- 1,336 registered PPP projects.
- 183 PPP projects relate to the "Energy and housing sector".
- Most Energy and Housing projects focus on building power lines, improving energy efficiency by renovating thermal power plants, improving street lighting and lighting of public enterprises.
- There are no PPP projects in the area of renewable energy.



# Key factors for the application of PPPs in RES

- **FSC status:** lack of credit rating, untested state guarantee mechanism, lack of capital, lack of successfully implemented projects.
- **Drawbacks of model PPA:** non-compliance with international standards.
- **Tariff levels: Current auction tariff levels are not attractive to investors.**
- **Tendering for PPPs:** the selection of the private partner in a PPP can be done through a tender or through "direct negotiations". The second option can be used by developers of a specific existing RES facility or, if the developer has the rights to an appropriate land plot suitable for the project, as well as valid grid connection agreements. A private initiative has a more simplified procedure.
- **Remote areas:** the potential need to develop energy projects in certain areas of the country, which, if based on RES auctions, are unattractive to investors.
- **Revenues:** the state support mechanism under PPP schemes can provide investors with an acceptable revenue stream in addition to the auction tariff.
- **SPV:** under a PPP scheme, the government and a private investor can set up an SPV for a specific project.



# PPP as a possible solution

- **Counterparty:** the government of Kazakhstan may be a party to a PPP contract (not FSC).
- **Contractual structure:** acceptable terms can be negotiated with the government of Kazakhstan on the basis of international practice.
- **Fixed payment schedule for the duration of the PPP contract:** the Government of the Republic of Kazakhstan can assume construction and operational risks. In particular, the government can invest in PPP projects through co-financing (CAPEX), investment cost recovery (CAPEX), operating cost recovery (OPEX), facility management fees; rent for the use of a privately owned facility; and availability fees.
- The possibility of receiving one or more types of state support provided for in the PPP law.
- **No sequestration:** State budget expenditure incurred to meet obligations for PPP projects is not subject to sequestration/reduction during budget execution.
- **Public bodies can participate in a PPP project:** in particular, by participating in the creation and operation of PPP companies, providing land, providing the PPP facility with engineering infrastructure, and providing public support, including budgetary payments.

# Reforms needed in RES sector

1. Implementation of pre-qualification requirements for RES bidders.
2. Analysis and improvement of the RES power purchase agreement (PPA) with the FSC.
3. Development and implementation of rules for RES auctions with energy storages.
4. Definition of small and large RES.
5. Development of a model bilateral power purchase agreement from RES facilities.
6. Tariff schedule (fixed tariffs) for wind and solar, taking into account storage facilities.
7. Requirements for forecasting electricity generation from RES. Establishment of forecast deviation limits and establishment of a sanction for exceeding the allowed deviation.



# Challenges of implementing RES projects via PPP

- The PPP tenderer or private investor shall justify the relevance and feasibility of the project, which is not required in the case of RES auctions.
- Time-consuming procedure for selecting private PPP partners (can take 6-12 months or more).
- For PPP projects, there is a requirement to transfer the PPP object to state ownership if state support measures in the form of co-financing and compensation of investment costs are provided.
- State support in the form of a guarantee of state consumption of a certain amount of goods, works and services is not elaborated and the mechanism of implementation of this state support is not tested in practice.
- Unclear relationship between auction tariff received under PPA with FSC and receipt of state support measures (payments from budget for compensation of capital and operating costs) under PPP project.
- PPPs are less attractive in terms of project financing because the PPP object (i.e. the power plant itself) cannot be pledged during the term of the contract if the private partner has received investment cost compensation from the state.
- The need to participate in a PPP tender and thus the risk of not getting the project despite the time and resources spent.
- The risk of applying the "1 to 1" criteria, which limits the government's obligations for a PPP project.

# Findings

- The relative success of RES auctions has demonstrated the relative efficiency of the auction tariff mechanism, with the FSC procuring electricity from RES auction producers without the use of rather complex PPP schemes.
- Due to the bureaucracy and time consuming process of preparing and reviewing documentation in PPP bidding procedures, as well as other barriers discussed above, lead to low interest of both the state side and private businesses in applying PPP tools in the renewable energy sector in Kazakhstan.
- Given the high degree of depreciation of Kazakhstan's energy system and the country's intention to ensure energy security and low-carbon development, the introduction of a PPP model in the green energy sector (especially for stand-alone projects) has the potential to become an alternative to the RES auction mechanism, or to be used together.
- Nevertheless, the viability of the PPP model in the RES sector has yet to be proven in practice. In our view, the use of a PPP scheme may be in demand for energy projects, government incentivised in remote areas or off-grid systems where investors are not interested in investing even with an attractive feed-in tariff or in large projects of special importance to the government.



Thanks for your attention!

