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An orange light to green investments?

A brief analysis of the investment appeal of renewable energy sources in Russia

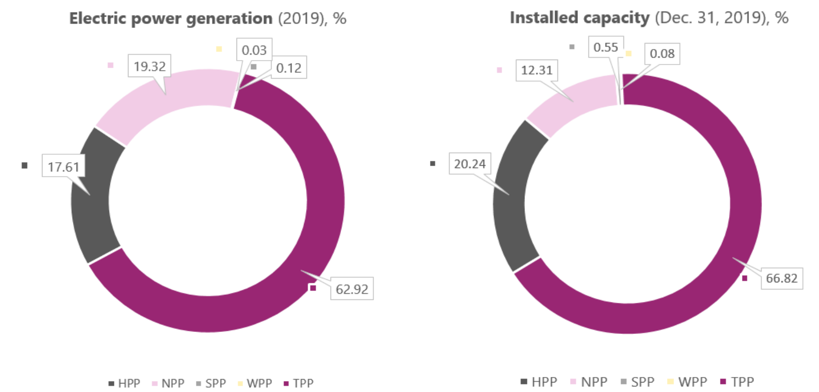
Uncertainty about the amount of state support for renewable energy projects under the DPM 2 program may impair the investment appeal of the industry for a wide range of investors, but the decision to extend the program is a positive message for key market players.

- The extension of the support program for the Russian renewable energy industry (DPM 2) for the period from 2025 to 2035 was a positive message for the market and contributed to the active growth of investments in renewable energy projects. ACRA believes that the mechanism of long-term contracts for the supply of capacity through payments generated at a special increased tariff used in the DPM 1 program is the most effective tool for supporting the sector and increasing the investment appeal of its assets in Russia, as well as attracting investments through project finance arrangements.
- The proposed **cut in the support for the DPM 2 program** would result in a decrease in the volume of new capacities on the renewable energy market and, **according to ACRA's estimates, may lead to a reduction in potential investments in the sector by RUB 150–180 bln**.
- To mitigate the impact of the reduced support, project finance bonds and securitization programs may be useful in refinancing loans issued under the DPM 1 program.

State support is the most important factor in the development of the RES sector in Russia. The renewable energy sector, including wind and solar energy sources,[1] was started in Russia after the RF Government approved the first support program for renewable energy sources for 2013–2024 (aka DPM 1).[2] According to Rusnano, to date, the total capacity of wind power plants is about 0.5 GW, and solar power plants generate 1.2 GW. By 2024, the total capacity of green energy sources may exceed 5.5 GW.

The DPM 1 program was successful in terms of maximizing the drive for constructing new power plants. Nevertheless, the share of renewable energy sources, primarily solar and wind power plants, in the total electricity generation and installed capacity of the UES of Russia remains low (less than 1%, *Fig. 1*).

Figure 1. Electricity generation and installed capacity of the UES of Russia



Source: JSC SO UES, 2019, RAVI, 2020

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[1] This paper focuses mainly on solar energy sources.

[2] The Russian renewable energy market support program (2013–2024), based on long-term capacity supply contracts (DPM), which are 15-years contracts between power generating companies and large purchasers of capacity in the regulated market. According to the Decree, all key market players are obliged to enter into electricity and capacity supply agreements with power generating companies.

World practices include various formats of support for the renewable energy industry (for example, green certificates, reimbursement of feed-in costs, fixed tariffs). Nevertheless, in ACRA's opinion, at present the most effective market tool that makes renewable energy projects attractive to investors (primarily for commercial banks) is long-term contracts for the supply of capacity against payments charged at a special increased tariff (which usually accounts for more than 90% of revenue). This mechanism minimizes the volatility of forecast cash flows and, as a result, market risk for renewable energy projects. Since renewable energy projects are financed mainly through project finance arrangements (when loans are granted against stable future cash flows under capacity supply agreements), the predictability of cash flows is one of the key factors in evaluating the investment appeal of projects.

Thanks to the first renewable energy support program, DPM contracts have become clear to the market, and lenders have gained experience in applying them. Capacity sold under such contracts is paid not at the expense of state funds, but by consumers in the wholesale electricity and capacity market, through a tariff regulated by **the RF Government Decree of May 28, 2013 No. 449 "On incentives for using renewable energy sources in the wholesale electricity and capacity market."** The tariff calculated by the state allows investors to fully return their investments capital and receive income within 15 years (as investors receive a portion of proceeds from electricity sales). In addition, the tariff reimburses certain operating costs of renewable energy facilities and refunds property and profit taxes.

The operating expenses are reimbursed based on the standard set forth by the Decree (taking into account annual adjustments to the inflation rate), the taxes are refunded using the calculated values. The return on investments of 12–14% is an annuity calculated by the regulator of the wholesale electricity and capacity market.

The DPM 1 program has become the most important driver for renewable energy investments. Foremost, the requirement from the RF Ministry of Industry and Trade to localize the manufacture of certain equipment used in the renewable energy facilities became an incentive for the construction of relevant manufacturing plants by most of the companies involved in the renewable energy projects.

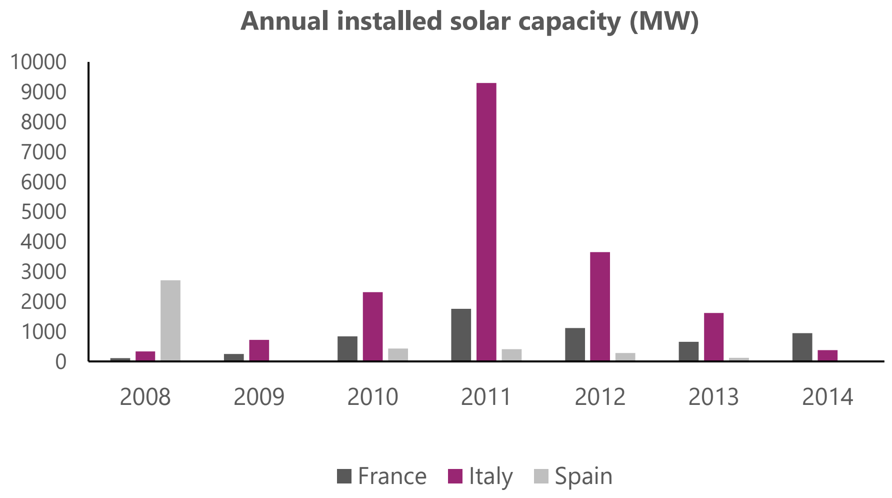
In 2025–2035, the second renewable energy support program (aka DPM dash, or DPM 2) will be implemented. A specific feature of the program is more stringent requirements for its participants, including a significantly deeper localization, decrease in capital expenses by 1½–2 times, higher energy efficiency, and mandatory energy exports. In ACRA's opinion, the extension of the DPM program (though in a modified format) was a positive message for the market that contributed to the active growth of investments in renewable energy projects.

Currently, the program budget is expected to be cut by 30% from RUB 400 bln to RUB 306 bln. This is explained by the need to prevent the electricity prices outrunning the inflation rate. Therefore, the total capacity of new wind and solar power plants may drop to 4.6 GW against expected 7 GW.

Generally, any support for renewable energy industry is ultimately paid for by end customers, and the government faces a dilemma: either to support the renewable energy sector or to curb the rise in electricity prices. On the other hand, the experience of European countries shows that regulatory changes aimed at reducing the volume of state support may affect the investor appeal of RES assets.

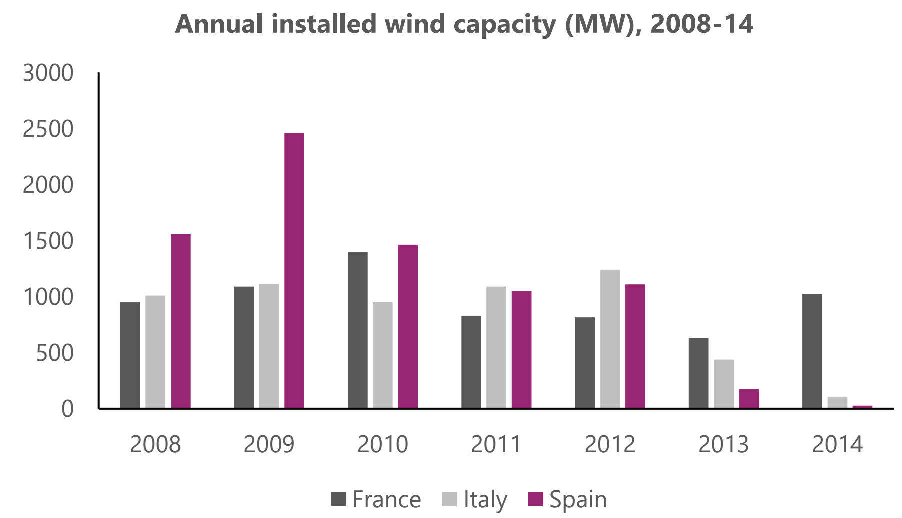
In particular, Spain, Italy and France saw significant declines in the number of solar and wind projects in 2011–2014 due to the regulatory and financing uncertainty. Changes in or doubts about the state support have led to a sharp decline in the number of renewable energy installations in these countries (*Fig. 2-3*).

Figure 2. Large reversals in annual solar installations in Spain and Italy were driven by regulatory uncertainty



Source: IEA

Figure 3. Declines in wind installations in 2013-14 also reflected regulatory concerns



Source: European Wind Energy Association

ACRA's estimates show that a possible reduction in the volume of support for renewable energy sources under the DPM 2 program may lead to a decrease in potential investments in the sector by RUB 150–180 bln (depending on the change in the forecasted capital expenses per 1 MW) and, accordingly, to a slowdown in the development of the industry. Indeed, such solution will reduce the load on the wholesale electricity and capacity market (i.e., consumers). In ACRA's opinion, the negative effect of the reduced support can be minimized by refinancing the loans issued under the DPM 1 program, through issuing project financing bonds, and securitization.[3] This will allow the released funds to be used to cover the costs associated with more stringent localization requirements of the RF Ministry of Industry and Trade.

[3] The applicability of such instruments in RES projects will be considered in more detail in the next research of ACRA.