Appendix 1

RUSSIAN NATIONAL TAXONOMY FOR GREEN PROJECTS

Green projects include projects aiming at improving the environment, reducing pollution, reducing greenhouse gas emissions, enhancing energy efficiency, and adaptation to climate change.

1. Waste Management and Recycling

   1.1.1. construction of infrastructure for separate collection and sorting of SMW;
   1.1.2. construction of waste recycling facilities (use of SMW for the production of goods, execution of work and provision of services, including recovery, regeneration and waste-to-energy processes);

1.2. Construction of infrastructure for the processing and re-use of waste generated during the construction, renovation and repair of buildings, structures and infrastructure facilities.

1.3. Construction of waste management infrastructure with the generation of electric and thermal energy;
   1.3.1. construction of waste-to-energy facilities for SMW;
   1.3.2. construction of landfill gas power plants;
   1.3.3. development of technologies, production of installations and construction related to pyrolysis, gasification and biodegradation of SMW;
   1.3.4. development of technology, equipment manufacturing and construction related to waste processing facilities for woodworking, logging and timber processing;
   1.3.5. development and production of environmentally friendly low-power equipment for thermal waste disposal for operation in remote and inaccessible territories.

1.4. Development of technologies for the use of materials made of products from the processing of industrial dumps, industrial waste and SMW.

1.5. Creation of production and technical complexes for collecting, transporting, processing, recycling and disposal of wastes of I, II and III Hazard Classes;
   1.5.1. development and introduction of technologies and equipment for the environmentally safe collection and transportation of hazardous wastes;
   1.5.2. production of special equipment for the removal of hazardous wastes and contaminated materials from the territories of industrial and service enterprises (including car service and car wash stations).
1.6. Construction of facilities for the disposal, neutralization and recycling of liquid municipal waste.

1.7. Development and introduction of biodegradable materials;
   1.7.1. production of biodegradable materials (excluding the generation of microplastics);
   1.7.2. production of biodegradable packaging for the food industry and trade, creation of infrastructure for composting and disposal of biodegradable materials.

1.8. Production and implementation of automatic control systems for estimating discharges and emissions at enterprises of various hazard categories.

1.9. Development and implementation of digital systems for measurement and control of waste management and of secondary resources, including their transportation.

2. **Energy**

2.1. Increase in energy and ecological efficiency and reduction in harmful emissions of thermal power plants.

2.2. Urban and municipal heating systems – reconstruction, modernization and transfer to more eco-friendly energy sources:
   2.2.1. construction of cogeneration facilities;
   2.2.2. transfer of urban heating systems from coal to natural gas or to renewable energy sources;
   2.2.3. digitalization of heating and energy facilities control systems.

2.3. Construction of power plants based on renewable energy sources, including solar energy, wind energy, hydropower\(^1\), geothermal energy, biomass, organic products of production and consumption waste processing, including SMW, landfill gas, biogas, hydrogen.

2.4. Development, production, construction and installation of energy saving and recovery facilities.

2.5. Production and installation of equipment for power plants based on renewable energy sources.


2.7. Modernization of energy delivery and distribution facilities leading to a reduction in energy losses and to an increase in the safety level. Increase in the efficiency of energy delivery.

2.8. Installation of intelligent energy control, distribution, and management systems.

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\(^1\) In the event that it does not lead to transformations of river ecosystems or to mass resettlement

2.10. Initiatives conducted through energy service contracts aimed at increasing the energy savings and energy efficiency of energy consumption.

3. **Construction**

3.1. Green buildings and structures:
   
   3.1.1. Construction of buildings with very low energy consumption ("passive" and "active" buildings);
   
   3.1.2. Use of materials from recycled man-made waste, industrial and solid municipal waste in construction;
   
   3.1.3. Application of materials produced with the use of low-carbon technologies in construction;
   
   3.1.4. Use of 100% recyclable steel and aluminum structures in construction;
   
   3.1.5. Production of solar water heaters, their installation for service buildings and residential buildings;
   
   3.1.6. Energy efficient modernization of centralized and individual energy supply systems for buildings, including hot water supply and heating, replacement of electric appliances, lighting systems and elevators with energy efficient ones.

3.2. Development and implementation of technologies, development and production of construction materials and structures ensuring energy efficiency of buildings and structures.

3.3. Application of renewable energy units in the construction of buildings (solar collectors for hot water supply, photovoltaic panels for power generation, heat pumps, house-wide waste water heat disposers, etc.).

3.4. Increasing the efficiency of heat supply and air conditioning systems, including with low-temperature coolants, heat exchangers and reducing heat losses.

3.5. Conversion of industrial and municipal facilities to LED lighting.

3.6. Development, production and implementation of electronic systems and means for environmental impact monitoring during construction of buildings, structures and infrastructure facilities as well as means of monitoring of environmental impact during operation of buildings, structures and infrastructure facilities.

3.7. Development of technologies and infrastructure for recycling and reuse of waste generated during renovation and repair of buildings, structures and infrastructure facilities.

4. **Industrial production**

4.1. Environmentally friendly mechanical engineering;
4.1.1. Production of machinery, including utility and agricultural equipment, which uses electric traction and gas engine fuel.

4.2. Power and resource efficient materials and technologies;

4.2.1. Development and introduction for industrial use of energy- and resource-saving technologies, which reduce negative impact on the environment;

4.2.2. Development and introduction for industrial use of technologies, and production of equipment, which allow the use of recycled materials and semi-finished products made from large tonnage construction waste, ameliorants and sorbents for road facilities, urban utilities and agriculture.

4.3. Development and introduction for industrial use of closed cycle (wasteless) production processes:

4.3.1. Production of fibers, canvases and nonwoven materials from recycled materials;

4.3.2. Development and introduction of technologies, which use industrial waste and secondary materials obtained from processing industrial waste, for the construction of transport infrastructure;

4.3.3. Building, renovation and re-equipment of integrated pulp and paper production facilities, which results in disposal of all types of waste and planned use of recycled materials (waste paper) in production;

4.3.4. Introduction of technologies for integrated wasteless chemical production, production of rubber, plastic and composite materials;

4.3.5. Introduction of integrated wasteless technologies at metallurgical and metal-working facilities;

4.3.6. Introduction of technologies for processing depleted raw materials, scrap metal, motor vehicle scrap, river and sea vessels.

4.4. Development, production and introduction for industrial use of systems and tools for automatic monitoring of emissions at enterprises with various degrees of negative environmental impact.

5. Transport

5.1. Public transport

5.1.1. Conversion of public transport fleet to transport running on electricity and gas;

5.1.2. Replacement of public transport fleet with electric and gas-fueled vehicles

5.1.3. Construction of public urban electric and gas-fueled transport infrastructure

5.1.4. Manufacturing of equipment and construction of charging infrastructure, including charging stations and online charging elements of linear infrastructure;

5.1.5. Manufacturing, purchase of suburban electric vehicles.

5.2. Rail transport:
5.2.1. conversion of rail transport to electric-powered trains;
5.2.2. manufacturing of electric locomotives.

5.3. Road freight transport:
5.3.1. manufacturing, purchase of gas-fueled freight trucks;
5.3.2. natural gas fuel supply chain facility: equipment manufacturing, storage and distribution;
5.3.3. construction of natural gas fueling infrastructure;

5.4. Hydrogen and fuel cell transport.

5.5. Eco-friendly river transport.

5.6. Maritime transport:
5.6.1. construction of LNG fueled vessels;
5.6.2. conversion of marine vessels to LNG;
5.6.3. building infrastructure for LNG bunkering.

5.7. Manufacturing of electric and natural gas-fueled vehicles to be used in logistics centres, ports, airports, freight and passenger terminals.

6. **Water supply and wastewater disposal**

6.1. River and lakes revitalization and preservation, habitat restoration;
6.1.1. Cleaning of rivers and water reservoirs from garbage, effluents, fuel oil and other pollutants;
6.1.2. eco-friendly dredging and coast protection;
6.1.3. raising and disposal of sunken vessels.

6.2. Construction, renovation and upgrade of waterworks and hydraulic structures.

6.3. Construction, renovation and upgrade of drinking water supply facilities. Use of water losses preventing technologies in water supply systems.

6.4. Sewage water treatment facilities construction and technological upgrade.

6.5. Construction, operation and renovation of urban and rural wastewater treatment facilities and recycling facilities, sludge disposal facilities.

6.6. Water-saving technologies in agriculture, industry and housing utilities infrastructure.

6.7. Construction of the infrastructure facilities for flood prevention, protection of aquatic bio resources.

6.8. Construction and operation of seawater and brackish water desalination facilities, as well as installations for condensation of atmospheric water.

6.9. Digitalization of water supply and wastewater disposal facilities.
6.10. Technologies aimed at increasing the reuse of water resources in agriculture, industry and housing utilities.

7. Forestry

7.1. Reforestation and afforestation with full long-term care for forest stands.
7.2. Reforestation resistant to fires, pathogenic organisms and climate changes.
7.3. The flooding of peat bogs to reduce CO2 emissions and fire risks.
7.4. Identification of the especially valuable forests to prevent global climate change and loss of biodiversity.

8. Conservation of natural landscapes and biodiversity

8.1. Conservation and restoration of biodiversity:
   8.1.1. development and maintenance of natural protected areas (hereinafter - NPAs), including the establishment of environmentally related NPA networks on federal, regional and local levels;
   8.1.2. conservation of certain rare species, subspecies and populations of animals and plants, as well as their habitats, implementation of programs preventing and regulating invasive alien species;
   8.1.3. implementation of corporate biodiversity conservations programs aimed at mitigation of impacts on biodiversity with respect to ARRO-hierarchy principles.

8.2. Restoration of natural landscapes:
   8.2.1. development and introduction of nature-based solutions to restore certain types of ecosystems and natural landscapes;
   8.2.2. compensatory reforestation (“like for like or better”);
   8.2.3. application of technologies for the use of industrial waste and secondary raw materials obtained by processing industrial waste in the restoration of disturbed lands and the elimination of mine workings;
   8.2.4. restore eroded, saline irrigated lands, including flushing and remediation of saline soils, remove toxic water-soluble salts.

8.3. Restoration of disturbed areas. Liquidation of landfills:
   8.3.1. rehabilitation of disturbed lands and land plots, providing for full or partial restoration of landscape components and biodiversity to its original conditions or close to it;
   8.3.2. creation of infrastructure within NPAs for separate collection, transportation and sorting of garbage, with the installation of special garbage containers protected from animals;
8.3.3. comprehensive reclamation and remediation of land plots used for storage, processing and disposal of waste.

9. Information and communication technologies

9.2. Construction of data processing and storage centers, including registers of harmful emission sources and wastes, and production of recyclable materials.
9.3. Intelligent transport systems based on energy-saving technologies.