**Korolev Rocket & Space Corporation Energia**

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*“RSC Energia”, “RKK Energiya”, and “RKK Energia” redirect here.*

 *For the Soviet rocket designed to carry the space shuttles of the Buran program, see Energia.*

 *For the company supplying gas and electricity on the Irish Islands, see Energia (company).*

**OAO S.P. Korolyov Rocket and Space Corporation Energia** (Russian: Ракетно-космическая корпорация «Энергия» им. С.П. Королёва, *Raketno-kosmicheskaya korporatsiya “Energiya” im. S.P. Korolyova*), also known as **RSC Energia** (РКК «Энергия», **RKK “Energiya”**), is a Russian manufacturer of spacecraft and space station components. The company is the prime developer and contractor of the Russian manned spaceflight program; it also owns a majority of Sea Launch. Its name is derived from Sergei Korolyov, the first chief of its design bureau, and the Russian word for energy.

**Overview**

Energia is the largest company of the Russian space industry and one of its key players. It is responsible for all operations involving manned spaceflight and is the lead developer of the Soyuz and Progress spacecraft, and the lead developer of the Russian end of the International Space Station. The company employs between 22,000—30,000 people.

The enterprise has been awarded with 4 Orders of Lenin, Order of the October Revolution and Russian Federation President's Message of Thanks. In addition, 14 cosmonauts employed by the company have been awarded the title "Hero of the Russian Federation".

**Structure**

Prime Minister Vladimir Putin inspecting a test and control station at the Energia Rocket and Space Corporation

The company consists of the following subsidiaries and branches:

* Primary Design Bureau
* Baikonur branch
* ZAO Experimental Machine-building Plant
* ZAO Volzhskoye DB
* ZAO PO Kosmos

In addition, the company possesses a developed social infrastructure.

38% of the company's stock is owned by the Russian state.

**History**

*"OKB-1", "TsKBEM", "NPO Energia", "S.P. Korolyov RSC Energia" and "Korolev design bureau" redirect here.*

The company was founded on 16 May 1946 and has been known successively as:

* **Special Design Bureau number 1 of R&D Institute number 88** (Russian: ОКБ-1 НИИ-88 or **OKB-1** of NII-88)
* **TsKBEM** (Central Design Bureau of Experimental Machine Building)
* **NPO Energia**
* **S.P. Korolyov RSC Energia**.

It is named after the first chief of its design bureau Sergei Korolyov (1946–1966). His successors as chief designers were: Vasiliy Mishin (1966–1974), Valentin Glushko (1974–1989), Yuriy Semenov (1989–2005), Nikolay Sevastyanov (2005–2007). Its current President and Chief designer is Vitaliy Lopota.

Korolev's design bureau was, beginning with the first artificial satellite Sputnik 1 and the first manned spaceflight of Vostok 1, responsible for a major part of the Soviet space program. It was the main rival of OKB-52 (later known as TsKBM, then the design bureau of Vladimir Chelomei) during the Soviet manned lunar programs and the Soviet space station program. OKB-1 was among others responsible for the development of the manned Soyuz spacecraft and its Soyuz rocket, the N1 "Moon Shot" rocket, large parts of the Salyut space station program, the unmanned Progress resupply craft and designed the Energia rocket for the Buran space shuttle program. Since the early beginnings of Luna program is designed many space probes, among others of the Venera, Zond and Mars program.

The company continues to dominate a large part of the Russian space program, and a considerable part of the World's space program, with its Soyuz rockets and spacecraft having become the only crewed spacecraft conducting regular flights and the exclusive crew transport vehicle for the International Space Station after the Space Shuttle retirement. As of 2012[update] this will remain unchanged until an crewed US spacecraft like the Orion or one the Commercial Crew Development spacecraft is ready to use for the ISS – with the Chinese Shenzhou program being the only other program in the World with planned semi-regular crewed spaceflights.

**Ongoing projects**

* Energia builds Russia's Soyuz TMA spacecraft for 3-person human spaceflight missions and Progress M robotic spacecraft for cargo missions.
* Russian segment of ISS: providing its own cosmonauts for ISS expeditions; responsibility for all Russian scientific experiments.
* Sea Launch project participation - production of block DM-SL as the upper stage for Ukrainian launch vehicle Zenit-3SL.
* Universal Spacecraft Configuration - usage for development of: communications satellites, remote sensing satellites, navigation satellites and unmanned orbital servicing satellites. USC was a basis for "Yamal-100" and "Yamal-200" satellites.

**Future projects**

* Further assembly of ISS Russian segment: development of Multipurpose Laboratory Module (together with Krunichev Space Centre) and "Oka" space production modules (not permanently attached to ISS).
* Development of new spacecraft with 3 stages:
	1. Modernization of "Soyuz TMA" spacecraft for manned circum-lunar missions - pending commercial orders for space tourism.
	2. Development of "Parom" space tug (in order to replace "Progress M" cargo spacecraft).
	3. Development of multi-aimed Prospective Piloted Transport System (PPTS, Rus') (instead of abandoned Kliper project) for 6 persons.
* Development of manned lunar program: landing by 2025, creating of permanent lunar base by 2030 in order to extract helium-3.
* Development of manned Mars mission: landing beyond 2035.
* Development of "Yamal-300" and "Yamal-400" communication satellites for Gazprom corporation.
* Development of "Smotr" remote sensing satellites.
* Development of a pod designed for clearing near-Earth space of satellite debris. The new device is planned to be assembled by 2020 and tested by 2023. The concept is to build the device to use a nuclear power source so that it could remain on task for up to 15 years, primarily working in the geosynchronous orbit zone. Debris collected would be de-orbited to re-enter over the ocean.

**Historic projects**

Over the years the products of Energia and its predecessors included:

[**IRBMs**](http://en.wikipedia.org/wiki/Intermediate-range_ballistic_missile) **and** [**ICBMs**](http://en.wikipedia.org/wiki/Intercontinental_ballistic_missile)

Including meteorological rockets as their modifications.

* [R-1 (missile)](http://en.wikipedia.org/wiki/R-1_%28missile%29) R-1B, R-1V, R-1D, R-1E
* [R-2 (missile)](http://en.wikipedia.org/wiki/R-2_%28missile%29)
* [R-5 missile](http://en.wikipedia.org/wiki/R-5_missile), R-5M, R-11, R-11A, R-11F
* [R-7 Semyorka](http://en.wikipedia.org/wiki/R-7_Semyorka),
* [R-9 Desna](http://en.wikipedia.org/wiki/R-9_Desna)
* [RT-2](http://en.wikipedia.org/wiki/RT-2)P;

[**Launch vehicles**](http://en.wikipedia.org/wiki/Launch_vehicle)

* [R-7 (rocket family)](http://en.wikipedia.org/wiki/R-7_%28rocket_family%29)
* [Sputnik (rocket)](http://en.wikipedia.org/wiki/Sputnik_%28rocket%29)
* [Luna (rocket)](http://en.wikipedia.org/wiki/Luna_%28rocket%29)
* [Vostok rocket](http://en.wikipedia.org/wiki/Vostok_rocket)
* [Polyot (rocket)](http://en.wikipedia.org/wiki/Polyot_%28rocket%29)
* [Voskhod (rocket)](http://en.wikipedia.org/wiki/Voskhod_%28rocket%29)
* [Molniya (rocket)](http://en.wikipedia.org/wiki/Molniya_%28rocket%29)
* [Soyuz (rocket)](http://en.wikipedia.org/wiki/Soyuz_%28rocket%29)
* [N1 rocket](http://en.wikipedia.org/wiki/N1_rocket) as a part of N1-L3 lunar complex
* [Block D](http://en.wikipedia.org/wiki/Block_D)
* [Energia](http://en.wikipedia.org/wiki/Energia)
	+ [Energia II](http://en.wikipedia.org/wiki/Energia_II)
* "Yamal", ["Kvant"](http://en.wikipedia.org/w/index.php?title=Kvant_rocket&action=edit&redlink=1), ["Kvant-1"](http://en.wikipedia.org/w/index.php?title=Kvant_rocket&action=edit&redlink=1), ["Avrora"](http://en.wikipedia.org/w/index.php?title=Avrora_rocket&action=edit&redlink=1);
* upper stages for different kinds of [launch vehicles](http://en.wikipedia.org/wiki/Launch_vehicle): blocks [L](http://en.wikipedia.org/w/index.php?title=Block_L&action=edit&redlink=1) and [DM](http://en.wikipedia.org/wiki/Block_D);

**Research, Observation and Communication** [**Earth**](http://en.wikipedia.org/wiki/Earth) **Satellites**

* ["Sputnik" Program](http://en.wikipedia.org/wiki/Sputnik_program)
	+ [Sputnik 1](http://en.wikipedia.org/wiki/Sputnik_1)
	+ [Sputnik 2](http://en.wikipedia.org/wiki/Sputnik_2)
	+ [Sputnik 3](http://en.wikipedia.org/wiki/Sputnik_3)
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	+ [Sputnik 7](http://en.wikipedia.org/wiki/Sputnik_7)
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	+ [Sputnik 10](http://en.wikipedia.org/wiki/Sputnik_10)
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* "[Elektron](http://en.wikipedia.org/w/index.php?title=Elektron_(satellite)&action=edit&redlink=1)"
* ["Zenit"](http://en.wikipedia.org/wiki/Zenit_spy_satellite)
* ["Molniya"](http://en.wikipedia.org/wiki/Molniya_%28satellite%29),
* "[Signal](http://en.wikipedia.org/w/index.php?title=Signal_(satellite)&action=edit&redlink=1)",
* ["Yamal"](http://en.wikipedia.org/wiki/Yamal_%28satellite%29)
* [DZZ](http://en.wikipedia.org/wiki/Remote_sensing);

[**Deep Space**](http://en.wikipedia.org/wiki/Outer_space) **Exploration** [**Spacecraft**](http://en.wikipedia.org/wiki/Spacecraft)

* ["Luna" Program](http://en.wikipedia.org/wiki/Luna_programme)
	+ [Luna 1958A](http://en.wikipedia.org/wiki/Luna_1958A)
	+ [Luna 1958B](http://en.wikipedia.org/wiki/Luna_1958B)
	+ [Luna 1958C](http://en.wikipedia.org/wiki/Luna_1958C)
	+ [Luna 1](http://en.wikipedia.org/wiki/Luna_1)
	+ [Luna 1959A](http://en.wikipedia.org/wiki/Luna_1959A)
	+ [Luna 2](http://en.wikipedia.org/wiki/Luna_2)
	+ [Luna 3](http://en.wikipedia.org/wiki/Luna_3)
	+ [Luna 1960A](http://en.wikipedia.org/wiki/Luna_1960A)
	+ [Luna 1960B](http://en.wikipedia.org/wiki/Luna_1960B)
	+ [Luna 1963B](http://en.wikipedia.org/wiki/Luna_1963B)
	+ [Luna 4](http://en.wikipedia.org/wiki/Luna_4)
	+ [Luna 1964A](http://en.wikipedia.org/wiki/Luna_1964A)
	+ [Luna 1964B](http://en.wikipedia.org/wiki/Luna_1964B)
	+ [Cosmos 60](http://en.wikipedia.org/wiki/Cosmos_60)
	+ [Luna 1965A](http://en.wikipedia.org/wiki/Luna_1965A)
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	+ [Cosmos 111](http://en.wikipedia.org/wiki/Cosmos_111)
	+ [Luna 10](http://en.wikipedia.org/wiki/Luna_10)
	+ Luna 1966A
	+ [Luna 11](http://en.wikipedia.org/wiki/Luna_11)
	+ [Luna 12](http://en.wikipedia.org/wiki/Luna_12)
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	+ [Luna 14](http://en.wikipedia.org/wiki/Luna_14)
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	+ [Luna 24](http://en.wikipedia.org/wiki/Luna_24)
	+ [Luna 8K72](http://en.wikipedia.org/wiki/Luna_8K72)
* "[Venera](http://en.wikipedia.org/wiki/Venera)"
	+ [Cosmos 27](http://en.wikipedia.org/wiki/Cosmos_27)
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* ["Mars" Program](http://en.wikipedia.org/wiki/Mars_probe_program)
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	+ [Mars 96](http://en.wikipedia.org/wiki/Mars_96)
* ["Zond" Program](http://en.wikipedia.org/wiki/Zond_program)
	+ [Zond 1](http://en.wikipedia.org/wiki/Zond_1)
	+ [Zond 1964A](http://en.wikipedia.org/wiki/Zond_1964A)
	+ [Zond 2](http://en.wikipedia.org/wiki/Zond_2)
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	+ [Zond 7](http://en.wikipedia.org/wiki/Zond_7)
	+ [Zond 8](http://en.wikipedia.org/wiki/Zond_8)

[**Unmanned Cargo Spacecraft**](http://en.wikipedia.org/wiki/Unmanned_resupply_spacecraft)

* ["Progress"](http://en.wikipedia.org/wiki/Progress_spacecraft)
	+ [Progress-M](http://en.wikipedia.org/wiki/Progress-M)
	+ [Progress-M1](http://en.wikipedia.org/wiki/Progress-M1)
	+ [Progress 7K-TG](http://en.wikipedia.org/wiki/Progress_7K-TG)

[**Manned Spacecraft**](http://en.wikipedia.org/wiki/Human_spaceflight)

* [Vostok program](http://en.wikipedia.org/wiki/Vostok_programme)
	+ ["Vostok Spacecraft"](http://en.wikipedia.org/wiki/Vostok_spacecraft)
* [Voskhod program](http://en.wikipedia.org/wiki/Voskhod_programme)
	+ ["Voskhod Spacecraft"](http://en.wikipedia.org/wiki/Voskhod_spacecraft)
* [Soyuz program](http://en.wikipedia.org/wiki/Soyuz_programme)
	+ ["Soyuz" Spacecraft](http://en.wikipedia.org/wiki/Soyuz_spacecraft)
		- [Soyuz A](http://en.wikipedia.org/wiki/Soyuz_A)
		- [Soyuz B](http://en.wikipedia.org/wiki/Soyuz_B)
		- [Soyuz 7K-L1](http://en.wikipedia.org/wiki/Soyuz_7K-L1)
		- [Soyuz 7K-L3](http://en.wikipedia.org/wiki/Soyuz_7K-L3)
		- [Soyuz 7K-LOK](http://en.wikipedia.org/wiki/Soyuz_7K-LOK)
		- [Soyuz 7K-OK](http://en.wikipedia.org/wiki/Soyuz_7K-OK)
		- [Soyuz 7K-OKS](http://en.wikipedia.org/wiki/Soyuz_7K-OKS)
		- [Soyuz 7K-T](http://en.wikipedia.org/wiki/Soyuz_7K-T)
		- [Soyuz 7K-TM](http://en.wikipedia.org/wiki/Soyuz_7K-TM)
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		- [Soyuz TM-1](http://en.wikipedia.org/wiki/Soyuz_TM-1)
		- [Soyuz-TMA](http://en.wikipedia.org/wiki/Soyuz-TMA)
		- [Soyuz TMA-M](http://en.wikipedia.org/wiki/Soyuz_TMA-M)
		- [Soyuz-V](http://en.wikipedia.org/wiki/Soyuz-V)
		- [Military Soyuz](http://en.wikipedia.org/wiki/Military_Soyuz)
* [Buran program](http://en.wikipedia.org/wiki/Buran_programme)
	+ ["Buran" Spacecraft](http://en.wikipedia.org/wiki/Buran_%28spacecraft%29).
* [Kliper](http://en.wikipedia.org/wiki/Kliper)
* [LK (spacecraft)](http://en.wikipedia.org/wiki/LK_%28spacecraft%29)
* [Prospective Piloted Transport System](http://en.wikipedia.org/wiki/Prospective_Piloted_Transport_System)

[**Earth**](http://en.wikipedia.org/wiki/Earth)[**space stations**](http://en.wikipedia.org/wiki/Space_station)

* [Saylut program](http://en.wikipedia.org/w/index.php?title=Saylut_programme&action=edit&redlink=1)
	+ [Salyut](http://en.wikipedia.org/wiki/Salyut)
		- [Salyut 1](http://en.wikipedia.org/wiki/Salyut_1)
		- [Salyut 2](http://en.wikipedia.org/wiki/Salyut_2)
		- [Cosmos 557](http://en.wikipedia.org/wiki/Cosmos_557)
		- [Salyut 3](http://en.wikipedia.org/wiki/Salyut_3)
		- [Salyut 4](http://en.wikipedia.org/wiki/Salyut_4)
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		- [Salyut 6](http://en.wikipedia.org/wiki/Salyut_6)
		- [Salyut 7](http://en.wikipedia.org/wiki/Salyut_7)
* [Mir](http://en.wikipedia.org/wiki/Mir)
* Some modules of [ISS](http://en.wikipedia.org/wiki/International_Space_Station);

[**Lunar**](http://en.wikipedia.org/wiki/Moon) **Space Stations**

* [Soyuz A](http://en.wikipedia.org/wiki/Soyuz_A)
* [Soyuz 7K-L1](http://en.wikipedia.org/wiki/Soyuz_7K-L1)
* [Soyuz 7K-L3](http://en.wikipedia.org/wiki/Soyuz_7K-L3) with Lunar Landing Module (as a part of N1-L3 lunar complex).

**See also**

* [RKK Energiya museum](http://en.wikipedia.org/wiki/RKK_Energiya_museum)
* [Aerospace manufacturer](http://en.wikipedia.org/wiki/Aerospace_manufacturer)
* [Soyuz spacecraft](http://en.wikipedia.org/wiki/Soyuz_spacecraft)
* [MirCorp](http://en.wikipedia.org/wiki/MirCorp)
* [Kliper](http://en.wikipedia.org/wiki/Kliper)
* [Orbital Technologies Commercial Space Station](http://en.wikipedia.org/wiki/Orbital_Technologies_Commercial_Space_Station)
* [Parom](http://en.wikipedia.org/wiki/Parom)
* [Prospective Piloted Transport System](http://en.wikipedia.org/wiki/Prospective_Piloted_Transport_System)

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