Complex Energy Systems

Ural Federal University named after the first President of Russia B.N. Yeltsin

Degree or qualification is awarded: **Candidate of Science**

Language of study: **Russian, English**
Mode of study: **full-time**
Duration: **4 years**
Availability of free education: **no**
Price: **For non-CIS countries: 305,200 RUB (Year 1). Discounts apply. Please consult the curator for more details**

Programme webpage at the university website:
https://urfu.ru/en/international/programs-and-courses/doctoral-programs-in-english/

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View profile at **UrFU Research Portal**

Research goal:

The study is aimed at training specialists in the field of improving and introducing equipment for using renewable energy sources and two-phase flows in power machines pipelines.

Aspects studied:

- Dosimetry and protection from ionizing radiation
- Vibration of pipelines with two-phase flows in NPP equipment
- Main and auxiliary equipment of renewable energy sources
- Heat pumps, biogas plants, solar PV system and vacuum collectors, wind turbines
- Optimization of energy systems based on renewable energy sources

Research highlights:

- Research and improvement of RES equipment functioning modes
- Creation of software for optimizing complex energy systems based on RES Participation in innovation projects aimed at implementing RES

- Researching two-phase flows using experimental vibro-diagnostic stand
- Designing effective passive devices for decreasing pipeline vibrations at power plants

Career opportunities:

- Management of small innovation enterprises dealing with RES, designing power industry objects and infrastructure with the use of RES
- Managing power industry objects (heat and power supply) of an object, company, area, region
- Managing municipal, regional and republican sectors of implementing and developing RES
- Organization of international cooperation in the field of introducing innovative power objects using RES

Specializations within this programme