



New generation of engineers –
foundation for a secure future
of electric power industry



Public authorities

Energy sector
organizations:
SO, grid companies,
energy companies,
research facilities

Technical
universities

Funds and non-
government
organisations

- ❑ Training the new generation of Russian energy professionals
- ❑ Development of incentives for potential employers to invest in human capital, and a succession pool made of graduates of Russian technical universities
- ❑ Making for development of talent, professional excellence, and potential for creativity and innovation in the young people of today



All-Russian coverage

Operating openly and publicly

Common meeting site for public authorities, power industry organizations, and technical universities

International status

Special implementation mechanism – via energy departments of Russian technical universities

Traditions and their continuation

Planning and regularity

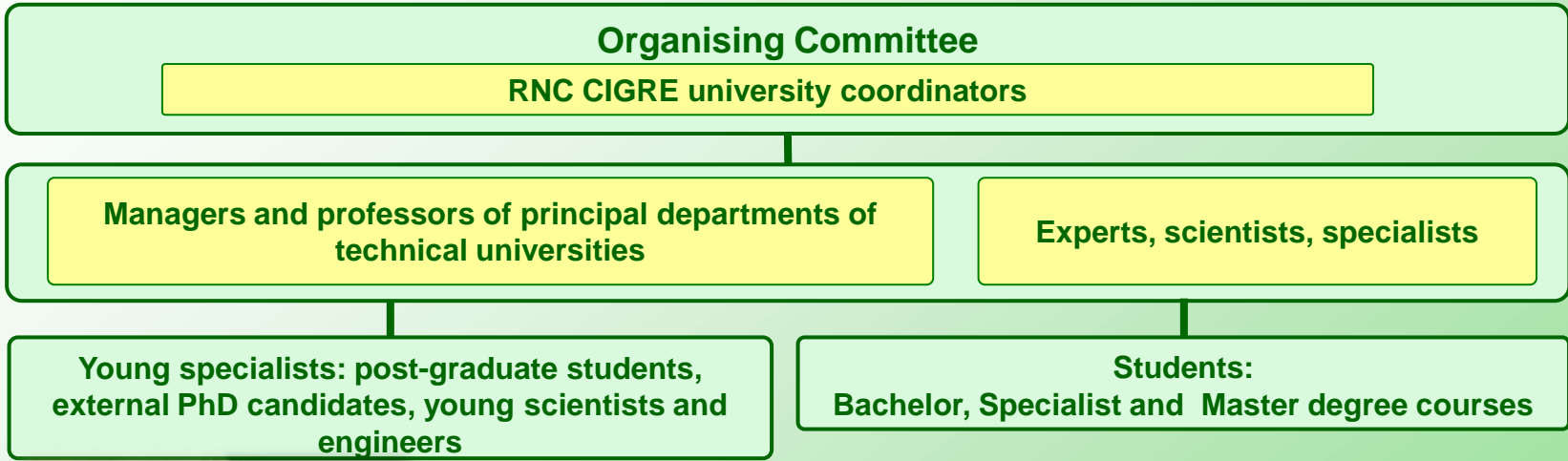
Cooperation agreements with the leading Russian technical universities

Declared objectives, principles and forms of activity

Organization management hierarchy

Informational independence

Regulations and Standards



Documentation

- Program Regulation for the RNC CIGRE Youth Section
- Regulation on CIGRE Membership for Participants of RNC CIGRE Youth Section Events
- Regulation on the Organising Committee of the RNC CIGRE Youth Section
- Action Plan of the RNC CIGRE Youth Section Program

Contract Relationship



- **Web-page of the RNC CIGRE Youth Section:**
<http://cigre.ru/rnk/youth/>
- **Publications: reports on activities within the RNC CIGRE Youth Section Program for 2012 and 2013**



- **Publications: issues 1,2,3,4 and 5 of RNC CIGRE Bulletin covering activities within the RNC CIGRE Youth Section Program**
- **8 videos on activities within the RNC CIGRE Youth Section Program**
- **75 press-releases on activities within the RNC CIGRE Youth Section Program**
- **8 regulations on activities within the RNC CIGRE Youth Section Program**

Twenty three (23) events took place in 2012-2014 including 3 international events. The total of over 3,500 Russian and foreign students and young engineers from grid and generating companies has taken part in the events:

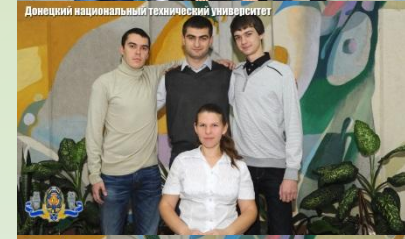
- Quizzes
- Academic competitions
- Conferences
- Forums
- Case competitions
- Training workshops



International Students Electric Power Engineering Competition is an annual event welcoming 131 students from 19 technical universities of Russia, Kazakhstan, Belarus and Ukraine. The competition of 2013 took place in November 15-17

Winners:

- I. Team of the Ivanovo State Power Engineering University
- II. Teams of the South Ural State University and the Ulyanovsk State Technical University
- III. Teams of Novosibirsk State Technical University, the Belarusian National Technical University, and the National Research University "Moscow Power Engineering Institute" (MPEI)



$$I_1 = (E_1 - U_{21}) \cdot \frac{1}{R'} = (E_1 - 0.9 \cdot E_1 - 8) \cdot \frac{1}{10} = 0.01 \cdot E_1 - 0.8$$

$$I_2 = (E_2 - U_{21}) \cdot \frac{1}{4 \cdot R'} = (0.5 \cdot E_1 - 0.9 \cdot E_1 - 8) \cdot \frac{1}{40} = -0.01 \cdot E_1 - 0.2$$

$$0.01 \cdot E_1 - 0.08 - 0.01 \cdot E_1 - 0.2 = -1 = -J_K$$

$$P_{E1} = E_1 \cdot I_1 = E_1 \cdot (0.01 \cdot E_1 - 0.8); P_{E2} = 0.5 \cdot E_1 \cdot I_2 = 0.5 \cdot E_1 \cdot (-0.01 \cdot E_1 - 0.2)$$

$$\sum P_K = E_1 \cdot (0.01 \cdot E_1 - 0.8 - 0.005 \cdot E_1 - 0.1) = 0.005 \cdot E_1 \cdot (E_1 - 180) = 0.005 \cdot (E_1^2 - 180) = 9.5 [Watt]$$

$$E_1^2 - 180 \cdot E_1 - \frac{95}{0.005} = 0$$

$$E_1^2 - 180 \cdot E_1 - 1900 = 0$$

International Scientific and Technical Conference: “Electrical Power Engineering: viewpoint of the Young”



November 17-19, 2010 – UrFU, Yekaterinburg

I



November 21-25, 2011 – SamSTU, Samara

II



October 22-26, 2012 – UrFU, Yekaterinburg

III



October 14-18, 2013 – SRSPU, Novocherkassk

IV



V

**November 10-14, 2014 – NR TPU,
Welcome to Tomsk, Russia**

Being the oldest engineering higher school in the Asian part of Russia, Tomsk Polytechnic University has produced generations of graduates who have gone on to become leaders in all areas of society and industry

<http://www.eegm2014.enin.tpu.ru/en>, organisational fee - non!





We express our thanks to the partners of the RNC CIGRE Youth Section Program



MINISTRY OF ENERGY OF THE RUSSIAN FEDERATION



www.kgeu.ru



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