



Power Engineering Market Development

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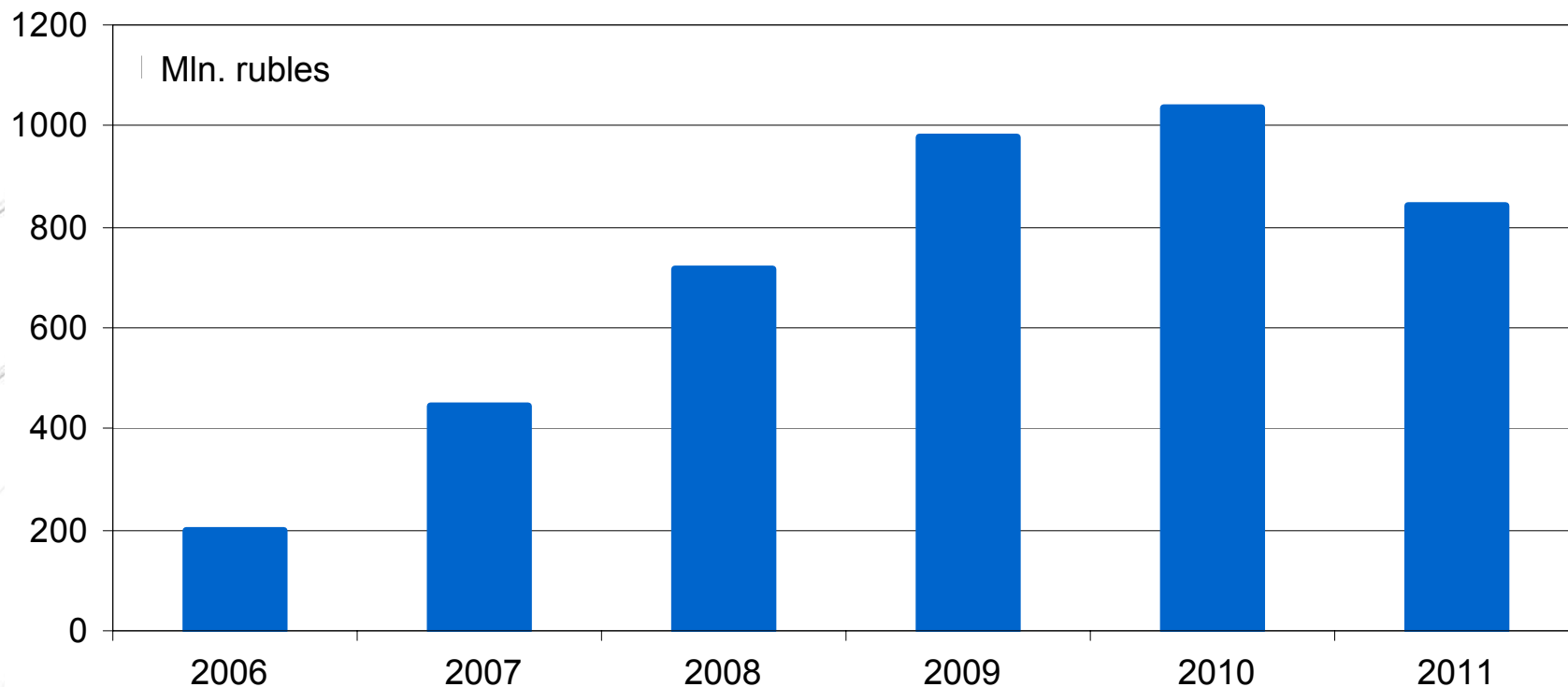
VII International Investment Forum «Sochi-2008»

Round table №4

Energy-saving technologies as an element of growth»

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**After period of stagnation (1990-2005)
since 2006 has presented the «explosive growth» of power
engineering market***



**Investment program in energy sector in 2008-2012 - 3,6 billion rubles
(projects of RAO UES and Rosenergoatom)
Construction of 40 GW new capacities**

* - * Represented data due to Investment Program of RAO UES of Russia and FSUE «Rosenergoatom»

Russian market of PowerGen Engineering: main tendencies

- Construction of new power units with application of combined cycle (steam and gas) technologies with high efficiency of 57-62%**
- Increase of contract price by 30% against prices in the beginning of 2007**
- High-level load of manufacturing capacities for the manufacturers of main and auxiliary equipment**
- «Wave-type» staff shortage under stages of project implementation (designers shortage is clearly tangible)**
- Foreign power engineering companies come into the market as EPC(M) contractors (GAMA, Iberinko, Alstom)**

Power Engineering Market Development

Explosive growth of the market leads to the coming of new players

1. «Old» Russian engineering companies

Technopromexport, Atomstroyexport
(mainly lack of its own resources)

3. «New» Russian engineering companies

(lack of its own resources)
(Energokaskad, KATEKenergoremont)

2. Foreign engineering companies

ALSTOM, Iberinco, GAMA, ENKA
(mainly lack its own resources in Russian Federation)

4. «New» Russian engineering companies

(with its own resources)
(E4 Group, EnergoStroyInvest-Holding)

Under conditions of resource shortage one of the most important advantages for EPC(M)-contractor is **possessing its own resources at all stages of project**

E4Group – engineering company of «new time»

E4 Group was established in 2006. E4 Group is the Company of «new time», which fulfill all requirements of the power engineering market. E4 Group has 14 holding companies (divisions), which comprise over 50 affiliates and subsidiaries in 27 regions of Russian Federation.

With own project-designing division we offer new engineering decisions which satisfy the Client's requirements in high efficiency and ecological parameters of projects

Under conditions of «wave-type» resource shortage in the market E4 Group possesses its own resources at all stages of project:

2 design institutes

4 construction and erection companies

2 commissioning companies

company that implement software & hardware complexes for power project system automation

Those factors permit to reduce risks of the Client and the Company:

Reduce risks to exceed terms of project realization

Reduce risks to exceed contract price

Increase in labour productivity

Application of new technologies in manufacturing and management

Partners and Clients of E4 Group

Primary clients of E4 Group

Power energy sector:

- OGK* -1,2,3
- TGC* -1,2,3,4,8,9,10,11
- Far East GenCo
- Novosibirskenergo
- FGC*
- IDGC*
- Rosenergoatom

Industrial sector:

- Sevmash
- Severstal
- Lukoil
- Metalloinvest holding (Lebedinskiy GOK)

Primary suppliers of E4 Group

- Siemens
- General Electric
- Mitsubishi
- Emaliance
- Elsib



**E4 Group market share is 23% (01.09.2008)
at the market of new construction for OGK+TGC (projects more 100 MW)**

Projects of E4 Group

- construction of 2xCCGT-420 Stavropolskaya GRES (OGK-2)
- construction of CCGT-420 Krasnodarskaya TPP (TGC-8)
- construction 3xCCGT-420 Nyaganskaya GRES (TGC-10)
- construction of the 4-th unit of CCGT-800 in Permskaya GRES (OGK-1)
- renovation of North-West boiler-house with CCGT-115, Kursk (TGC-4)
- renovation of Omskaya TPP-3 (TGC-11)





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