

Nuclear Industry in the Czech Republic Solid base for NPP projects

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Summary

- Czech power generation equipment– our precious heritage
- Current market situation – fact finding of the existing capabilities of the industry both for nuclear and fossile
- Exemples of readiness and investments of the manufacturers
- Big potential - will it be utilised ?
- Outcome of this conference?

Czech Power Generation Equipment – precious heritage

There is no other ex-Comecon country with such a huge potential
in power engineering

Russian Federation
– massive
reconstruction and
overhauls of the
existing plants



Not to use such huge potential in the upcoming new construction
in the power sector of the region and other countries would be a
big mistake !

Current market situation

- Latest EPC deliveries in the power engineering field from the Czech Republic: ŠKODAEXPORT – Pakistán, PSG – Russian Federation
- Energy policy of western Europe does not mean solid basis and good outlook for this type of deliveries
- Market potential concentrates in South/Eastern Europe, Middle East a Asia
- Is there (will there be) a strong EPC supplier based in the Czech Republic? Vítkovice – Turkey, Škoda Praha – not active abroad, IEG, SES, BTG z SR? Škoda Power, ČKD?
- Individual companies should cooperate and work jointly on foreign markets
- It is vital to share skills, experience, contacts. To divide roles and cooperate for common goals. To restrict competitive behaviour of Czech entities on foreign markets.

Current market situation (2)

- Key Czech suppliers are available and ready for all segments of power engineering:
- Fossil fuels
 - Coal Fired Plants– complete overhaul of Tušimice, new Unit at Ledvice
 - New Combined Cycle at Počerady
- Green energy
 - More than 3000 MWh installed in solar power
 - Increasing output of wind power
- Nuclear
 - Completion of NPP Mochovce – Units 3 and 4



Quality control of traditional manufacturers proves continuing high quality of the Czech power engineering industry and of available professional skills

CHVP competence in Nuclear NPP Mochovce Units 3,4

- Cooling towers for Units 3 and 4 – complete construction of cooling towers No. 5,6,7,8
 - New cooling system technolog
- Complete construction schedule for 4 towers: 19 months

Cooling towers were completed as the first lot on 31st July 2011 – on schedule, scope and quality

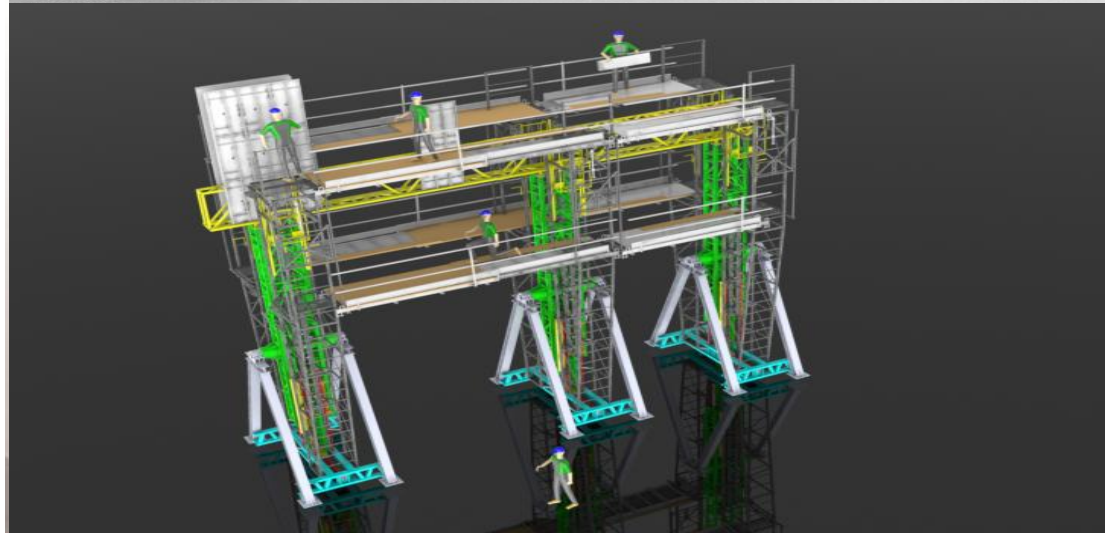
- Verification of project management in current international conditions
- Detail reporting in all project phases
- Verification of performance and flexibility under harsh schedule



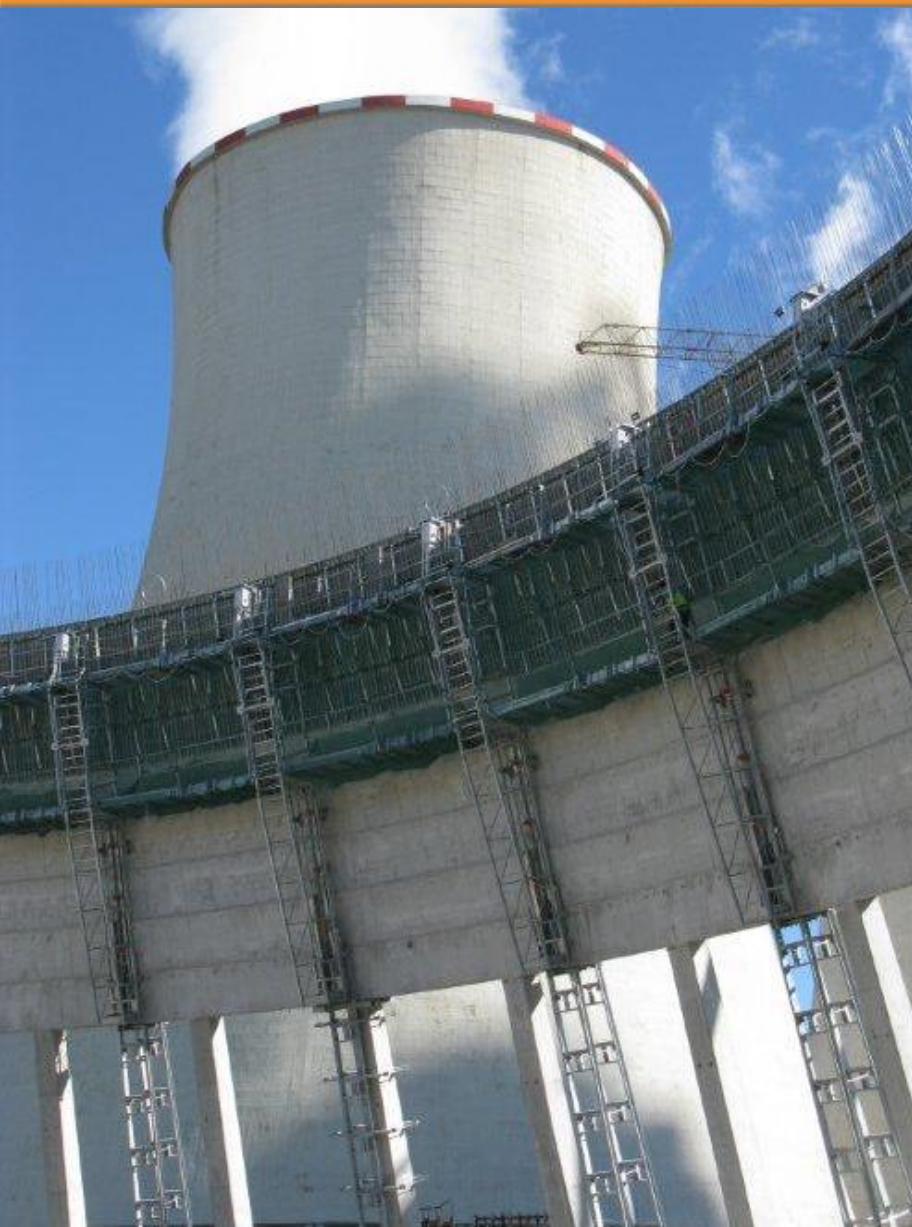
Investment program of Czech industry

- With the reconstruction of the Czech power sector important investments were started in the Czech power engineering industry further intensified by new Mochovce NPP and preparation for Temelín 3,4 Project
- As exemple, CHV Praha investment program is introduced
 - Cooperation with universities and research institutes, e.g. ČVUT Fakulta Strojní a Strojírenský Zkušební Ústav Brno
 - New equipment for forced draft tower shell construction including testing facilities and equipment (see picture on next 4 slides)
 - Total investment CZK 47 million between July 2010-June 2011

Project phases



Execution phase – final product



Execution phase – final product



Execution phase – final product



Such investment – what does that mean?

- Decision on investment spendings, research, preparation, testing, manufacturing, certification, implementation
- Use of experience versus implementation of new technologies/tools. Application of new standards
- Incorporation of diverse locations needs including extreme conditions, operation needs, special meteorology and safety requirements
- Accepting of research risk and of responsibility for new equipment functionality **vs.**
- Unique competition edge, unlimited growth possibilities for future demand
- World-wide unique research and testing facility for all parts of the equipment

Will this potential be utilised?

- It is being used for Mochovce completion where newcomers to nuclear sector are educated by us and other Czech suppliers.....
- How will our experience and investment be utilised for new projects?
- Will our investment be protected/utilised by the Czech government within new units construction in the Czech Republic? NPP Temelín, new CCPPs
- What is to be done:
 - Innovate and search for new products
 - Strengthen our position on other markets
 - Cooperate with strategic partners
 - To lobby jointly for the best decision for the construction of Temelín 3,4

References, new opportunities

- CHVP References
 - More than 80 forced draft cooling towers out of which 28 for nuclear power plants (4 completed in 2011)
- New challenges
 - Activities in RF, Ukraine, other ex-USSR countries, South and East Asia
 - Current marketing:
 - Rosatom: Novovoronezhskaja NPP, Kaliningradskaya NPP, LAES, Beloruskaya NPP
 - Gazprom Energo Holding – offers for TEC 20, TEC 8, Cerepovetskaya and other plants in the RF
 - Ukraine, Kazachstan, Uzbekistan
 - Investment in new technologies in
 - Cooling towers shell construction
 - Gasification and waste treatment, waste water sludge disposal
- Partnership agreement(s) with strategic partner(s)



Thanks for your attention
Questions ?

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