

**ENERGY INDUSTRY
– BACKBONE SECTOR
OF CZECH ECONOMY**

**IMPACT OF NEW
LEGISLATION ON
ENERGY CONTRACTS**

**CZECH
ENGINEERING
KEEPS GROWING**

CZECH ECONOMY

EXPERIENCES PERIOD OF BOOM

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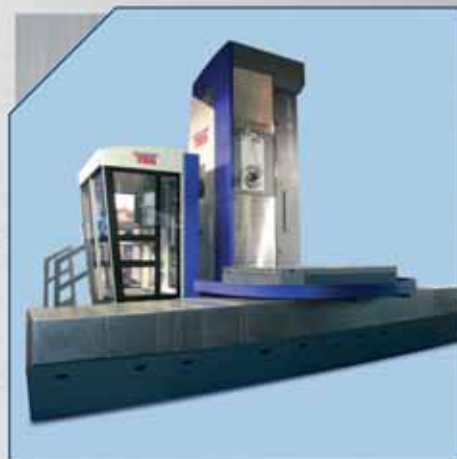
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Czech Business and Trade

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■ INTRODUCTION

Questions for Vladimír Dlouhý, President of the Czech Chamber of Commerce 4

■ ECONOMIC POLICY

Czech Economy Experiences Period of Boom 5

■ FINANCE

What Awaits Businessmen in the Area of Taxes 8

■ INVESTMENT

Massive Growth of Investment 10

Awards for the Most Important Investors and Business Property 11

■ KALEIDOSCOPE

Wages Increased by More than 3% Year-on-Year 12

Balance Sheet of Ten Years in the EU? Mostly Beneficial 12

Long-term Good Ratings 12

CR's Stable Position 12

Active Role of ICC CR 12

■ HOW TO DO BUSINESS IN THE CZECH REPUBLIC

Current Duties of Business Companies 14

Employment of Foreigners: Employee Card 16

■ ENERGY

Energy Industry – Backbone Sector of Czech Economy 18

The Czech Republic on the Way to Making Sophisticated Use of Pure Technologies 22

Impact of New Legislation on Energy Contracts 24

The Structure of Power Generation in the Czech Republic is Very Advantageous 26

in Terms of Energy Security and Output Diversity

Ecology and Energy Saving in the Focus 30

Unique Projects of Worldwide Importance Arising in the CR 32

■ CZECH TOP

Doosan Škoda Power – Your Reliable Partner 29

■ ENGINEERING

Czech Engineering Keeps Growing 34

Mechanical Engineering Keeps on Supporting the Czech Industry 36

The Czech Republic Holds Its Position among Leading Machine Tool 40

and Forming Machine Manufacturers

Czech Manufacturers of Agricultural Machinery Are Doing Well in Placing 44

New Machines on the Market

■ PRESENTATION OF FIRMS

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Questions for Vladimír Dlouhý, President of the Czech Chamber of Commerce

Which aims and priorities have you set for yourself as President of the Czech Chamber of Commerce?

We want to make the Chamber interesting, on both the national and regional levels, not only for our members, but for all Czech businessmen. In a year's time, I don't want to hear questions like: "What is the Chamber of Commerce good for?". In the long run, we would like to ensure lasting financing of our activities so as to be able to offer a wide range of products and services to our members, as well as partners (including governmental and state institutions), with the aim of contributing towards the improvement of the business environment in our country. Although this may not seem sufficient, it comprises everything essential: if we have money and good products, I am confident we'll realise our ambitions and become the main and essential representative of all businesses, small and medium-sized, as well as our largest firms, including those with foreign participation.

The VAT figures for June have confirmed the revival of the Czech economy. In your opinion, how will the development of the Czech economy continue?

We are at the beginning of a more significant revival. Growth may come close to 3% per annum, and the important thing is that the revival is not only the result of external demand for Czech exports, but that it is also due to growing household demand and private investments. This was not the case in the past two years, and it is gratifying to see the change. It is even more important, however, to initiate a growth that is more rapid than the EU average. In other words, it is necessary to return to the situation in which our economy tends towards the average of the advanced EU states. This was the case in our country until 2007, this is still the case today for our neighbours, Poland and Slovakia, and this is what the Czech economy must return to.

Czech industry offers foreign partners high quality and innovative products.

Can you say which of our strategic sectors are competitive and attractive to foreign partners, and why?

Maybe I'll disappoint you a little, but I think that even the President of the Chamber of Commerce cannot denote certain sectors



as being strategic. From the foreign investors' point of view, we are able to ensure high quality of our final products (cars, electronics, chemicals, food industry products) and often a much higher added value generated by processing. My wish is that an increasing number of foreign partners will invest in the sectors in which final, highly valued (with a much higher profit margin) products are manufactured on our territory. It does not matter in which sectors they invest, but it is important that the investments bring to this country top-level research, development, and the ability to apply the results to production.

Can you see any strong trend or expectation influencing the Czech economy and industry? What opportunities and setbacks lie ahead for Czech firms in 2014?

There are many such trends. The first, and a negative one at that, is the continued trend of slow growth of the Eurozone expected in the coming years, and even decades. The second, rather positive trend, is the dynamic development of a number of developing economies, not only the reputa-

ble BRICs, but also others, from Indonesia to Chile. The important thing for our businessmen and entrepreneurs is to know how to jump on the bandwagon, which our state institutions should assist them in doing. A special case is and will be the broadening gap between the low rate of European growth and the faster growth of the USA. The third, negative trend is the foreign policy and consequently the economic uncertainty in an increasing number of areas in the world, from the Ukrainian crisis to Syria, Iraq, Afghanistan and Pakistan, to the South China Sea. This may lead to the falling apart of global business, investment and financial links, which may have an unpleasant effect on prices and the availability of energy sources and raw materials, combined with protectionism, uncontrollable immigration waves, and many other problems. There are other similar, rather unpleasant trends, both foreign and domestic. However, in conclusion, at least one positive thing: in 2014, Czech firms can expect more good opportunities, rather than bad prospects. So let us take advantage of them.

Czech Economy Experiences Period of Boom

The Czech economy was hit by two major recessions in the last five years. The first (2009) resulted in a profound contraction of the economy caused by the onset of a cooling in the European economy, while the other – extremely long one (2012-2013) – was caused mainly by domestic restrictions, which resulted in a slump in consumer and investment demand. However, since the second quarter of last year, the Czech economy has found itself on a growth trajectory again, especially due to exports. The signs of a strong recovery are evident not only in exports, but consumption and investment are gradually following suit, after suffering thus far as a result of the significant restriction of public contracts. It is true that the Czech economy failed to compensate the 1st quarter fall in the rest of last year, and the GDP thus decreased overall – just as in the previous year – by 0.9 %.

Latest figures show that the Czech economy also recorded a favourable development in the first quarter of this year. Compared with the end of last year, GDP rose by 0.4% and the year-on-year rate of the economy accelerated to 2.5%. This result was mainly due to foreign trade, but the favourable turn is confirmed in both investment and consumption. At the same time, a further rise in domestic demand appears to be the most likely scenario for this and next year. After a two-year decline, real wages – and thus also the disposable income of households – are increasing, unemployment is decreasing, and consumer sentiments are significantly improving. Under the effect of the strong growth in new contracts in industry, the willingness of companies to invest not only in new transport equipment but also in new machinery and buildings is increasing.

The economy is pulled especially by the manufacturing industry – namely car pro-

duction – which rides the wave of the recovering European car market and increases its market shares over the long term. Success also marks the presence of the largest domestic car maker, Škoda Auto, in China, which has already become its main market. Furthermore, car manufacture is headed towards a new record this year, as has been indicated for some time by the new contracts in this sector, the value of which surpasses the level of the strong years 2007-2008 by over 40%. On the other hand, the building sector experienced a severe slump in the last six years and is rebounding from the bottom only slowly. New contracts are still lacking, primarily in the public sector and housing construction. Housing is even at half the level compared with the strongest years. However, new contracts provide at least the first signs of stabilisation and thus cessation of the long-time contraction. The services sector as a whole has so far not made a significant contribution to growth, perhaps with the exception of financial institutions, trade and transport. However, the restored growth of domestic demand should also assist other services to return to the growth trajectory, although some of them have thus far struggled hard to rebound from bottom in terms of real revenue.

■ INFLATION CLOSE TO ZERO

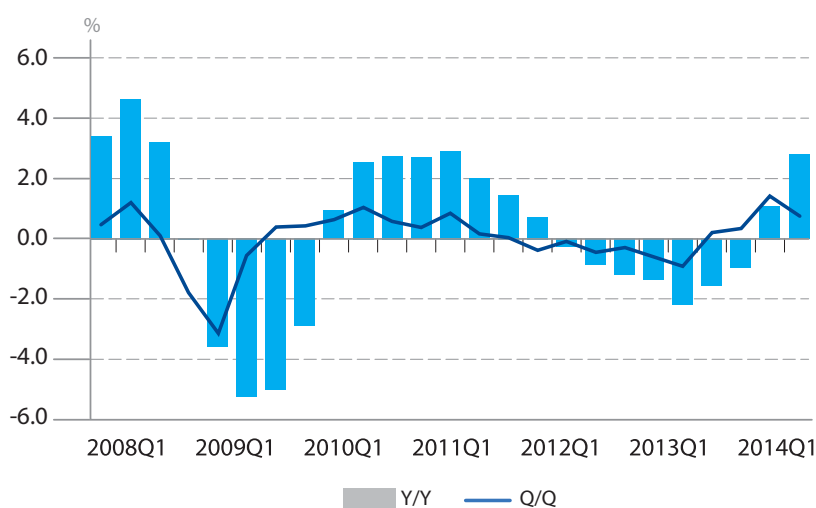
The revived growth of the economy and domestic demand has thus far not been evident in inflation, which is currently close to zero (May 0.4% y/y). The dominant effect on the practically zero inflation rate arose from

the cuts in electricity and natural gas prices for households in January. In addition, intense competition has continued for almost a year in the mobile telecommunications market, which is now also open to the so-called mobile virtual network operators and which is apparent in the substantial drop in the prices of these services for households and companies.

The threat of low inflation, and/or deflation, was the main reason for the Czech National Bank (CNB) to introduce its so-called intervention regime at the beginning of November. The CNB decided to considerably weaken the Czech crown to the level of 27 CZK/EUR and keep it there for a sufficiently long time until inflation pressures start to be felt in the economy. The start of this new system of monetary policy was connected with massive interventions against the Czech crown, which resulted in a steep rise in crown liquidity, but over time the market became 'used' to the new level and the crown became stabilised in the narrow interval of 27.20-27.50 CZK/EUR. Besides that, the main interest rate (deposit rate applied to excess liquidity deposited with the Central Bank) has remained at a technical zero (0.05 %) since autumn 2012.

In its forecast, the CNB still expects that it will not exit from the exchange rate regime before the beginning of next year, when it also expects the market interest rates to grow significantly. However, it appears more likely that the crown will exit from the current exchange rate regime later, just as the start of tightening of the monetary policy will come

CR: ECONOMIC GROWTH



later. Indeed, the inflation 'threat' still remains very low and the return of inflation to the target will be a matter of a longer term.

■ ECONOMY HEADING TO EXTERNAL BALANCE

The strong pull of exports in the last two years has resulted not only in a growing foreign trade surplus, but also in a substantial improvement in the results of the balance of payments current account, even despite the significant outflow of dividends from companies under foreign control (EUR 8.6 billion in foreign direct investment last year alone). In addition, the overall current account figure includes re-invested profits not leaving Czech territory, and the result of the adjusted current account is thus much more favourable in terms of balance than suggested by the overall figures. Its surplus without re-investment thus actually exceeded EUR 1.5 billion last year. A similar development can be expected this year, during which exports have been growing at double-digit rates and the trade balance will most probably achieve a new all-time high.

The current account as well as foreign debt are favourable from the viewpoint of external balance. Although it has risen in recent years due to the increased interest of domestic companies in foreign loans, in terms of relative value and debt service it remains in safe territory, threatening neither the exchange rate of the crown nor the country's rating.



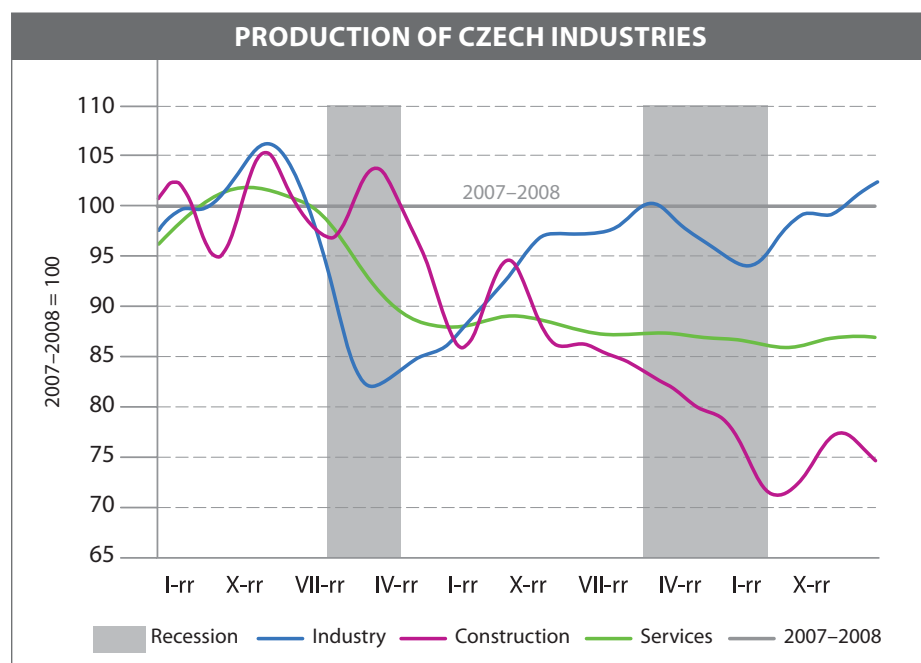
■ LOWEST DEFICIT OF PUBLIC BUDGETS IN SEVEN YEARS

Last year, the Czech Republic succeeded in reducing its public finance deficit to one-third when compared with the 2012 level. The public budgets deficit thus fell to -1.4%, and this actually resulted in a two-tenths drop in the CR public debt, to 46% of GDP. The Czech Republic thus remains in the group of the least indebted EU countries and does not have a problem with covering

its state budget deficit or with continuous refinancing of the state debt where the average refixation period has extended to 4.5 years this year.

Furthermore, in the first quarter of this year, the state debt ceased to grow. This was due on the one hand to a more effective use of the free liquid reserves on the state accounts, and, on the other hand, to the very good results of the state budget management at the beginning of the year. Although the budget envisages a deficit of CZK 112 billion, in the first four months, its results were in the black figures (almost EUR 1 billion surplus). Thus, there is a good chance of achieving a much more favourable budget deficit than approved. In the situation of the strong position of the Czech Ministry of Finance on the financial market, and the liquidity surplus on its accounts, this strengthens the Czech Republic's position on the financial markets. Furthermore, the government has endorsed the commitment that, in the budget outlook horizon, the public budgets deficit will not exceed the 3% Maastricht level.

Thanks to the positive development in public finances and also as a result of the generally declining yields in Europe and the lower aversion to risk, the yields of government bonds have significantly decreased this year. While, at the beginning of the year, the ten-year yield still amounted to approximate-



ly 2.5%, currently (June) this is merely 1.6%. At the same time, the risk surcharge on Czech bonds has significantly decreased, so that the difference between a Czech and a German bond has dropped to a mere 20 basis points.

The favourable development on the bonds market is also supported by the well capitalised and liquidity-stocked banking sector, which has ranked among the most profitable in Europe over the long term. The system, which operates with surplus liquidity and a very solid quality of credit portfolios, confirms its strength not only in terms of financial results, but also in the regular strict stress tests of the Czech National Bank. Moreover, it is a sector which, unlike in most countries in Western Europe, has successfully avoided the phenomenon known as credit crunch in recent years and has thus not interrupted the financing of both the ongoing and investment needs of the domestic economy. At the same time, the leverage of the banking sector and that of the economy as a whole remain at one of the lowest levels

in Europe, which again confirms the solid financial fundamentals of the country.

■ OUTLOOK

The Czech economy is experiencing a period of boom, which can possibly only be disrupted by a major and unexpected drop in foreign demand or a commodity shock. The basic economic fundamentals remain very solid. Moreover, a number of these have improved over time. Development to date suggests that economic growth will surpass the 2% level this year, due to the growing foreign as well as domestic demand, mainly for investment. The economic growth also results in increased job creation, thanks to which the unemployment rate will continue to fall and the Czech Republic will thus further strengthen its position among the countries with the lowest unemployment rates in the EU. We also expect the foreign trade surplus to achieve a new all-time record this year, which will be due mainly to the successful export of cars to the European market. On

the other hand, there is still very little probability that the economic growth will also result in higher inflation and thus compel the Central Bank to revise its monetary policy. Inflation will thus remain subdued, not only in the Czech Republic but also in Europe, so that the current interest rates will remain on the record low levels as well.

The new government which was elected last autumn is only gradually starting to implement their programme. The outlines of a new tax system are only beginning to be formed, and so is yet another 'reform' of the pensions system, which will most probably result in the abolition of the only recently formed second – the funds – pillar. The greatest challenge that the Czech Republic will thus continue to face is the process of population aging, which will cause further pressure for growth in expenditure on the Pensions and Health Care systems.

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INDUSTRY AND TRADE



What Awaits Businessmen in the Area of Taxes

In view of the changes of the political environment in the Czech Republic and the follow-up changes in tax legislation, we would like to inform the readers about some of these with regard to the situation in 2014, as well as with regard to changes to be expected after 2015.



■ VAT RATES

In the year 2014, two VAT rates continue to apply: the 21% basic rate and the 14% reduced rate. Annexe No. 2 to the VAT Act comprises a list of services coming under the reduced rate. Annexe No. 3 lists goods coming under the reduced rate. If any item (goods or service) is not listed in the Annexes, the basic tax rate shall apply to it. Sections 51-71g regulate the VAT exempt cases. In 2015, a further VAT rate reduction of 10% is envisaged (see Outlook 2015).

■ RECIPIENTS' GUARANTEE FOR VAT PAYMENT

As from 1 January 2014, tax administrators have already been calling on guarantors to pay their arrears in the case of their obligations as guarantors having arisen from their payments of the full or partial amounts made by cash-free transfer to an account other than the account of the taxable supply provider, whose name was published by the administrator in such a way as to make remote access possible, and providing that the payment was more than CZK 700 000 in each case. As regards payments to a foreign taxable supply provider who does not have an account in the Czech Republic, the taxable supply recipient shall be held responsible for the unpaid VAT irrespective of the amount.

■ ONLINE VAT RETURN

As from 1 January 2014, VAT payers are obliged to submit VAT return by electronic way. The only exception concerns natural persons whose maximum turnover for the 12 immediately preceding calendar months did not exceed CZK 6 million. In the case of the natural person having exceeded this amount, he/she shall be obliged to submit VAT return by electronic way for the tax pe-

riod following the tax period in which the amount of the turnover was exceeded, and which lasted for at least 6 calendar months.

■ TAXATION OF INVESTMENT FUNDS

In 2014, no changes have been made as regards the taxation of investment funds, and the taxation of all investment funds – i.e. collective investment funds and qualified investors' funds – is regulated by current legislation and amounts to 5% of the tax base.

■ TAXATION OF DIVIDENDS

Originally, the tax on dividends was to be abolished as from 2014. The measure was supported by a number of analysts, because this in fact would mean double taxation of the company's profit, and its abolition was expected to attract foreign capital. So the model continues to apply, where the income derived from dividends is relieved only in the case of legal persons, specifically joint stock companies, limited liability companies, and cooperatives having their permanent place of business in an EU member state, provided the relationship between the parent and the affiliated company complies with the provisions of the Income Tax Act, meaning that the qualified share of the parent company in the affiliation is at least 10% of its registered capital and that it was held by the parent company for at least 12 months. This condition may additionally be proved at a later stage, as it may not apply at the time the dividends are paid out. In the case of the parent/affiliation relationship not applying, the income from dividends paid to the legal person shall be subjected to the same taxation as the incomes of legal persons.

The amount paid to a natural person in dividends is subjected to a 15% Income Tax.

■ SALE OF SECURITIES IN THE CASE OF NATURAL PERSONS

With effect from 2014, the time test, after the expiry of which the income from the sale of securities is relieved from personal Income Tax, is prolonged. Specifically, the time test has been prolonged from 6 months to 3 years in the case of income from the sale of securities, in which the direct share of the natural person in the company's registered capital or in its voting rights did not exceed 5% for the duration of 24 months before the sale. The new time test will only begin to apply to investments started in 2014. In the case of investments acquired before and up to 31 December 2013, the original 6 months' time test applies. In short, this means that, in the event of the share being under 5%, the period is prolonged from 6 months to 3 years, while, if the share is over 5%, the term is shortened from 5 years to 3 years.

The time test for the transfer of shares to limited liability companies remains at the level of 5 years.

As from 2014, income from the sale of securities is tax exempt if the total amount of income for the calendar year does not exceed CZK 100 000. This is the amount of realised income, not profit. Income exceeding this amount will have to be stated in the Tax Return and taxed as personal income.

■ TAX ON ACQUIRED IMMOVABLE PROPERTY

The Tax on Acquired Immovable Property is regulated by Senate legal measure No. 340/2013 Coll. In contrast to the original Inheritance Act, Gift Act and Real Estate Transfer Act, I would like to mention two changes:

- The contracting parties may stipulate that the acquirer shall be the payer of the Tax on the Acquired Immovable Property;

■ Transfers of thus far unused structures or contributions to registered capital in the form of buildings shall no longer be relieved of tax. The tax is 4% of the tax base, which may be deducted from the acquisition value as a non-taxable expense.

■ OUTLOOK FOR 2015

As regards the outlook for 2015, important changes are expected to be introduced by the Income Tax Act, the VAT Act and the Immovable Property Tax Act.

Income Tax Act

- Re-introduction of tax allowance for pensioners;
- Raising the tax relief for the second and subsequent child by CZK 100 per month;
- Restriction of expense allowances for self-employed persons;
- As regards investment fund taxation, the reduced 5% Income Tax rates are only to be applied to certain types of investment funds, i.e. basic investment funds. Other

investment funds that do not meet the set conditions will be taxed by the ordinary Corporate Income Tax.

The VAT Act

The government has already approved the introduction of another reduced VAT rate, of 10%, to apply mainly to books and medicals. A new obligation will be to include control statements in VAT declarations, a measure intended to prevent tax evasion and improve tax collection. The control statements will have to be returned online only, and the Ministry of the Interior admits that it will mean a further administrative burden for businessmen and make higher claims on their technical equipment. The control statements will concern in particular domestic taxable supply recipients:

- who have paid an advance on a future taxable supply;
- who are investment gold manufacturers or manufacturers transforming gold into investment gold and are entitled to deduction;

- who have acquired the goods from another member state;
- who have received services provided in the Czech Republic by a person not resident in the Czech Republic.

The amount of the turnover for compulsory VAT registration is not expected to be reduced to CZK 750 000 for 12 subsequent months.

Immovable Property Tax Act

As from 2015, the terms for the payment of the Immovable Property Tax are to be more advantageous for taxpayers: in the case of buildings under construction that will be relieved of tax payment after completion, the Land Tax will not be raised during the construction. Another benefit for taxpayers as from 2015 will be that the tax on buildings will not apply to structures which are not completed and are not fit for use.

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8 October 2014, Ostrava, The Czech Republic



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Support of investments and creation of new jobs in the Moravian-Silesian Region

Economic analysis of actual conditions within the Region presented by top representatives of business, government and public entities. To express particular common solution directed to improvement of circumstances for entrepreneurial activities and utilisation of the human resources in the Region are objectives of the discussion.

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The Forum is mainly intended for potential investors and businessmen.
The conference is held under the auspices of the Prime Minister of the CR.



OSTRAVA!!!



Massive Growth of Investment

In 2013, CzechInvest Agency mediated 108 projects worth CZK 47.95 billion (EUR 1.8 billion), which was more than twice as much as in the previous year. The projects were mostly of a manufacturing character; among the sectors, the dominant branch was the manufacture of transport vehicles. Ranking next were engineering and the rubber and plastics industry. These manufacturing branches have a long tradition in the Czech Republic, with the country being able to offer a skilled labour force and good Czech suppliers.

In 2013, the most active investors in the Czech Republic were domestic or Czech-based affiliations of foreign investors who had come to the CR some time ago. As can be seen from CzechInvest statistics, four-fifths (80%) of the total number of projects in 2013 were expansions. The growing expansion of investment projects placed in this country indicates that investors who came to the CR and settled here consider this country sufficiently attractive for the development of their facilities. They are receiving new orders from this and other countries, and their works in the Czech Republic are competitive even within the framework of their concerns.

Last year was the most successful since pre-crisis 2007 with regard to investors' interest in the Czech Republic. This is due to the gradual revival of the entire European market. Investors' activities were also boosted by investment incentives, which are much more forthcoming to investors. However, the new rules of the European Commission which came into force in July 2014 reduced the support for big businesses from 40% to 25%. In this connection, the Czech Republic is preparing an amendment to the Investment Incentives Act to compensate in other ways for the lowering of the public support ceiling for investors.

GERMAN INVESTMENTS DOMINATE

Last year, most foreign investments came from Germany, specifically 23 projects worth CZK 8.6 billion (EUR 343.5 mill.). Benefiting most in this connection is the traditionally dominant transport vehicle manufacturing sector. Other active investors were the Americans (10 projects worth CZK 6.2 billion (EUR 245.7 million) and the Japanese (7 projects worth CZK 2.8 billion (EUR 109.3 million).

IMPORTANT PROJECTS

The largest investment last year was a project by the Danish company of Fibertex Nonwovens, a.s., which is enlarging its production of non-woven textiles and textile materials in Svitavy, Pardubice Region. The investment of CZK 2.6 billion (EUR 100.1 million) will create 45 new jobs. Another company, Biocel Paskov, a.s., is planning to invest nearly CZK 2.5 billion (EUR 96.6 million) in the enlarge-



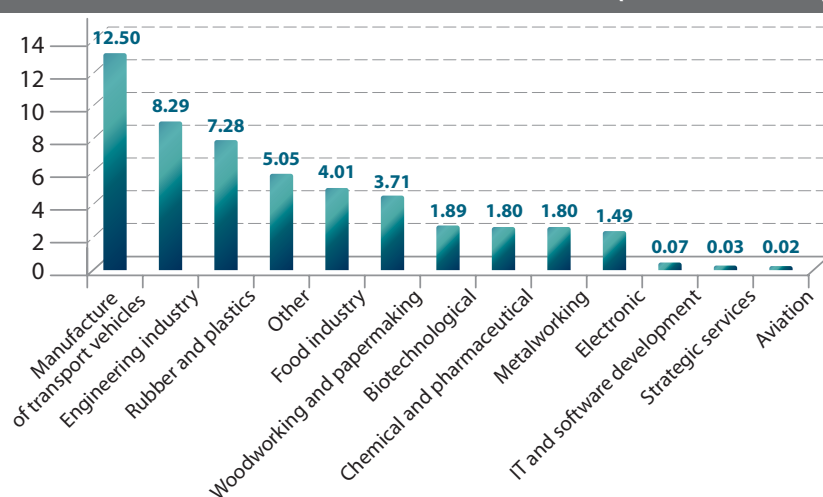
Panattoni Park Stříbro

ment of its existing viscose rayon plant in Paskov, Moravia-Silesia Region. The majority of jobs are to be created by Continental Barum, s.r.o., which is planning to invest CZK 2.5 billion (EUR 96.6 million) in Otrokovice, Zlín Region, where it will enlarge its manufacture of lorry tyres and employ 293 people in future.

INVESTMENT TRENDS IN 2014

In addition, the year 2014 is showing growing trends in investment – from January until mid-May 2014, the CzechInvest Agency received a total of 100 applications for investment incentives. This year's investment plans are expected to bring investments worth more than CZK 55 billion and create up to 10 000 new jobs, the majority in the Moravia-Silesia and the Ústí nad Labem Regions. In addition, in June the government approved an investment contract with Nexen, a company ranking among the most important investors in the history of the Czech Republic in terms of volume. The company will place a strategic investment project in the Czech Republic – the construction of a car tyre manufacturing plant. The plant will be located in the Žatec Triangle Strategic Industrial Park on a surface area of some 70 ha. In the first two stages of the project, more than 1000 new jobs will be created in the region, one of the hardest hit by unemployment on a long-term basis. From 2016 to 2017, in the first phase of the NEXEN investment project, EUR 829 million (approx. CZK 2.7 billion) will be invested here.

SECTORS BY AMOUNT OF INVESTMENT IN 2013 (IN CZK BILLION)





Awards for the Most Important Investors and Business Property

In June 2014, CzechInvest, together with AFI, Association for Foreign Investment, announced the winners of the 'Investor and Commercial Property of the Year' competition, which highlights the most beneficial investor projects and industrial property in the Czech Republic.

Besides the volume of investment, the competition criteria also included the number of jobs created and the benefits of the project for the region. The task for the jury was to choose in three categories those investors who were the most important for the



Czech Republic in 2013. The first place in the 'Production' category went to LEGO Production, s.r.o. which will create 600 new jobs in the Kladno district. First place in the 'Research and Development' category went to Honeywell, spol. s r.o. The Czech Republic is the global technology strategic base for Honeywell. In 1993, it opened its laboratory in Prague and, 10 years later, set up its development centre in Brno. In 2014, the prize went to Honeywell for the Expansion of the Honeywell Research and Development Centre in Brno. Thanks to the talent of its people and the most up-to-date infrastructure, the Honeywell, spol. s r.o. Brno Centre is working on current and next generation products for its divisions of Aerospace, Automation and Control Solutions and Transport Systems. In the area of 'IT and Shared Services', the jury's interest was attracted by Y Soft Corporation, a.s., whose product, called YSoft SafeQ, can reduce the printing costs of firms.

■ COMMERCIAL PROPERTY

Prizes for commercial property were also awarded in three categories. The first prize for the 'Industrial Park of the Year' category went to Panattoni Park Stříbro, which is located directly on exit 107 of the Plzeň D5 motorway, a quarter-hour drive from Plzeň

and a twenty-minute drive from the border crossing point with Germany. Companies located in the Park include Lear, Assa Abloy, Leoni, Ideal Automotive, and Steelcase. Thanks to its geographical position and its skilled employees, the Park is ideal for car industry subcontractors in neighbouring Bavaria. The Park covers 60 000 sq. metres of industrial surfaces and the plan is to enlarge the area to 155 000 sq. metres.

In the 'Property of the Year for Technological Centres and Services' category, the winner is the Technology Park Brno, a.s., located next to the Brno Technical University campus. This is a development project, which in its final phase will provide 190 000 sq. metres of mixed space for offices, research laboratories, light industry and spaces for leisure-time activities and services. Twenty-one companies have already located their premises in the Park, the most important among them being IBM Czech Republic, Vodafone, YSoft, FEI Czech Republic, Motorola Solutions, and Red Hat.

The 'Brownfield of the Year' is the Šternberk Business Park in the Olomouc Region. Thirteen companies concerned with engineering, machinery maintenance, the chemical industry, transport, construction, and telecommunications are already based in the Park. In future, these companies will employ up to 300 people.

■ SPECIAL AWARD

Like last year, this year AFI also presented two special awards. In the first category, the winning firm was Mann+Hummel Service s.r.o. and, in the second category, the company of ON Semiconductor Czech Republic, s.r.o. Both winners are pursuing activities in the areas of production and strategic and development solutions. Starting development activities outside the mother country is usually a very strategic decision, which in most cases is preceded by manufacturing and learning the local environment. In addition, both firms operate in regions with high unemployment rates. Obviously, the German company, Mann+Hummel, have found an ideal environment for their activities in the Vysočina (Highlands) Region, where it was given a very good reception. Years ago, the US company of ON Semiconductor took over the former manufacturing compound of TESLA in Rožnov pod Radhoštěm and created more than 1000 jobs there.

Wages Increased by More than 3% Year-on-Year

The average wages increased by 3.3 % in the Czech Republic in the first quarter of this year, and the average gross wage thus amounted to CZK 24 806. Thanks to low inflation, the real wages of Czech employees are thus significantly increasing as well. According to the Czech Statistical Office (ČSÚ), the nominal increase in gross wages, combined with the continuing low inflation of about 0.2 %, was the reason why real Czech wages improved quite significantly on the average in the first quarter of this year. A real wage increase of this size has not been usual in the Czech Republic in recent times. The long-term trend suggests the continuation of a very low wage rate, while the average salary rose by 2.8 %, at 2% inflation, in the last two years.

Balance Sheet of Ten Years in the EU? Mostly Beneficial

According to politicians, economists and businesses, the Czech economy has benefited from the Czech Republic's entry into the EU. Its growth is more dynamic than it would be without the influence of EU countries. The free market and movement of goods facilitated for companies their trading with other countries, but what remains a problem is the low competitiveness of the CR in international markets. Over the ten years, the Czech Republic has obtained CZK 333 billion from the European funds and the total volume of investment has increased to CZK 415 billion since our entry into the EU. Over 145 000 jobs have been created, according to the CzechInvest Agency. The biggest investors in the domestic market include the Hyundai, Volkswagen, and



Daikin Industries firms. Regarding exports, statistics recorded them at 59% of the gross domestic product before the Czech Republic's entry into the EU, and last year they already amounted to almost 79% of GDP.

CR's Stable Position

In 2013, the Czech Republic remained the 17th richest country of the European Union in terms of gross domestic product per inhabitant. Luxembourg continues to be the richest country with a great lead, Bulgaria remains the poorest. According to Eurostat, the Czech Republic is doing better than most countries of the former communist bloc. It has been overtaken only by Slovenia, while it is richer than Greece and Portugal.



Long-term Good Ratings

In May 2014, the Fitch Ratings agency affirmed the Czech Republic's long-term foreign currency Issuer Default Ratings at A+, which is a higher medium quality. It also left the other credit ratings of the State unchanged. According to its projection, the Czech economy will grow by 1.9% this year, after last year's contraction of 0.9%. Next year, economic growth is even to accelerate to 2.5%. Despite two consecutive years of recession, the fundamentals of the economy remained intact and private and public indebtedness is low. The agency noted a fairly

flexible labour market had helped to prevent a rise in unemployment through the recession. It stated that Czech economic recovery would be aided by an improved Eurozone outlook, the domestic monetary policy targeting a weaker CZK, and renewed public investment. The agency also stated that the formation of a new government after last year's early elections has reduced uncertainty around fiscal policy. This year as well as next year, it expects the budget deficit to stay within 3% of the gross domestic product, which is the threshold set by the European Union. The deficits are to amount to 1.8% of GDP this year and to 2.3% of GDP next year.

Active Role of ICC CR

The International Chamber of Commerce (ICC) today represents thousands of companies and associations from more than 120 countries. The purpose of the ICC National Committee in the Czech Republic is to assist Czech enterprises and other companies in their incorporation into international activities through this prestigious global organisation. The ICC CR provides a broad range of services crucial for foreign trade transactions. These primarily include educational and consulting services, as well as the creation of opportunities for forming partnerships with foreign business partners. Other ICC activities include events, seminars and conferences organised by the ICC Czech Republic. Examples of the events in the first half of 2014 were e.g. Export of Services, a club evening, the Costa Rica – Trade and Investment round table, Meetings with Ambassadors in territories such as Azerbaijan, Georgia, Belarus, Spain, Saudi Arabia, and Libya. More on current events at www.icc-cr.cz/.

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Current Duties of Business Companies

The current duties of business companies, which are stated in the Business Corporations Act ("Act") and have to be fulfilled by the end of June 2014, are especially execution of needful changes of Memorandums of Association and amendment of Agreements on Discharge of the Office.

■ CHANGES CONCERNING THE MEMORANDUM OF ASSOCIATION

The Act lays down that the stipulations of the Memorandum of Association (including the Articles of Association/by-laws and Deeds of incorporation) which are in contradiction with the mandatory provisions of the Act shall be terminated on its effective day, i.e. 1st January 2014. The Act obliges companies to adjust their Memorandum of association ("Memorandum") to the requirements of the new Act by 1st July

2014 and to deliver the documents to the Collection of Documents. If a company has failed to do so, the Registry Court will send it a call to correct the situation. In case that company omits to utilise the respite given to it, it will face dissolution and following liquidation.

The Act gives to companies an option to choose the legal regime to comply with. They may either carry out a general opt-in and become fully subordinated to the new legislation and enter this form in the Commercial Register, or they may adapt their Memorandum to be in conformity with the mandatory provisions of the new Act, while leaving the rest under governance of the former legislation. The Act sets a time limit by which this subordination must be made, which is 1st January 2016.

The companies which have not done yet so, are recommended to revise their Memorandum and to adjust it to the compulsory provisions of the Act. It is also advisable to consider changing the Memorandum completely and subordinate it fully to the new legislation to avoid any potential doubts.

■ AGREEMENT ON DISCHARGE OF THE OFFICE

Another duty is to adapt the texts of the agreements on discharge of the office performed by the members of corporations' bodies and have them approved by the company's General Meeting. The Act contains essential elements of the agreements, especially with regard to remuneration. If the agreements are not constituted under the Act within the set time limit, the performance of the office shall not be remunerated. The remuneration should be regulated in detail so the agreement regulates all the performances, i.e. also the in-kind benefits and the other performances, e.g. providing cell phone, laptop, meal vouchers etc.

As the new legislation is expected to be amended, it is worth paying attention to the development in this field.

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is situated on the second floor of the Terminal 2 departure hall in the public section outside the security check. It's popular with people waiting for someone to arrive. This lounge may also be used for organising pre-departure business meetings; a tablet is available for presentations. The best thing about this lounge is the individual security check. Passengers need not stand in line for the regular check in the airport hall.

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is available for passengers in Terminal 1, and designated for flights out-

side the Schengen Area. Clients may deal with their business matters in the lounge, making use of the separate MasterCard Elite Lounge or just relax and enjoy the panoramic view of the apron.

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is located in Terminal 1. In addition to offering a place of comfort before you take off, the lounge is also a great place for business meetings. The Premier Private Lounge is available to provide absolute privacy, featuring a bar with all-inclusive refreshments.



Employment of Foreigners: Employee Card

For the purposes of employing foreign nationals, citizens of the EU, the EEA and Switzerland (hereinafter EU citizens) are not considered as foreigners under Czech law. Therefore they have the same position as citizens of the Czech Republic and the Work / Residence Permit is not requested in the matter of their employment in the Czech Republic.

In the case of EU citizens, the employer is obliged to inform the relevant regional department of the Labour Office about such employment. The EU citizen is then required to report the place of his or her residence to the Foreign Police, unless the provider of his/her accommodation has already done so. Therefore, this article only provides information concerning the employment of third-country citizens, and, for simplifying the terminology, refers to them as "foreigners".

Foreigners may be employed in the Czech Republic only if they have obtained a Work Permit and a Residence Permit for employment purposes. The original system, where two separate applications had to be filed (with the exception of the former Green and Blue Cards), has been basically changed by the new Amendment to the Foreigners Act, which became effective on 26 June 2014. The main way to get both permissions is now the Employee Card. The Employee Card has dual character, which means that it comprises both the Employment Permit and the Residence Permit. Green Cards have been completely abolished, but the Blue Cards remain.

■ EMPLOYEE CARD

1. Employer's Duties – Reporting

Before hiring a foreigner, the employer is required to report to the relevant Labour Office department the vacant position and its characteristics, i.e. type of work, place of work, qualifications required for the vacancy, basic information about working and salary conditions, whether the job is for a determined or an indeterminate period of time and its expected duration. If the vacancy is not filled within 30 days of its being

reported and the work is to be done under a Work Contract or an Agreement to perform work, where the weekly working time will be at least 15 hours, and the monthly wage will be at least the minimum wage (CZK 8 500 = approx. EUR 300/USD 400), irrespective of the length of the weekly working time, the vacancy will be included in the list of vacancies to be filled by Employee Card holders.

However, in contrast to the former practice, the employer is no longer obliged to report to the regional department of the Labour Office to consult with them the intention of giving the job to a foreigner. In this respect, the new legislation is a simplification.

2. The Foreigner's Duties – Filing an Application

Applications for Employee Cards are filed with the relevant Czech Embassy in the country of which the applicant is a national. In the case of the citizens of specified countries (under Decree No. 429/2010 Coll.), the application may be filed with any Czech Embassy. If the foreigner is already staying on the territory of the Czech Republic, he/she may file his/her application with the relevant department of the Ministry of the Interior of the Czech Republic. The application must be presented in person.

Besides the foreigner's identification data, the application must contain the number and description of the vacancy listed in the central register of job vacancies available to Employee Card holders. Together with the application, the foreigner is required to present his/her passport, a document showing the address at which he/she is accommodated, two photographs (unless the foreigner's photo record has been made), his/her Work Contract or Agreement to perform work (or a letter of intent), documents showing the foreigner's skills (e.g. nostrified educational documents, qualification documents, document showing that the conditions for performing a regulated profession have been met). Upon request, the foreigner is required to present a document analogous with a copy of an entry in the criminal records and a medical report confirming the foreigner is not suffering from a serious disease.

The time period for deciding regarding the application is 60 days; 90 days in especially complicated cases, or in the case of the De-

partment for Asylum and Migration Policy of the Ministry of the Interior of the Czech Republic having requested the Labour Office of the Czech Republic for a binding decision.

The administration fee for filing the application is CZK 1000 (approx. EUR 37 / USD 49). Usually, the Employee Card is valid for the duration of the Employment Contract, but not longer than two years, with the possibility of its repeated prolongation. This means that the Employee Card is always linked to the specific working position (there may be several concurrent positions) for which it was issued, or a working position which was approved by the relevant authorities in connection with a change of the working position of the foreigner - Employee Card holder.

In the event of the foreigner's application for the issue of the Employee Card being settled favourably, the Czech Embassy will confirm this in the foreigner's passport. The foreigner is further required to submit a document confirming he/she has concluded travel health insurance that covers the time from the date of the foreigner's arrival in the Czech Republic to the day he/she enters employment, which will entitle him/her to public health insurance.

3. Employee Card Extension

The validity of the Employee Card may be extended several times on the same terms as those under which the Employee Card was issued, for the length of time for which the Employment Contract or the Agreement to perform work was concluded, but in each case, for no longer than two years. Applications for the extension of the validity of the Employment Card are filed with the Ministry of the Interior of the Czech Republic. Applications may be filed not sooner than 90 days before and not later than 14 days before the expiry of the existing Employee Card.

4. Special Cases – Non-Dual Mode of Employee Card

In specific cases, the Employee Card is not of a dual character, but only comprises a Residence Permit to stay on the territory of the Czech Republic, not a Work Permit.

The first such case is the situation in which the foreigner has free access to the labour market in the Czech Republic (Section 98 of the Employment Act). This concerns, for example, foreigners having a Permanent Residence Permit in the Czech Republic, the



family dependants of members of a diplomatic mission or consular office, foreigners granted asylum, teachers, scientists and academic workers, students under 26 years of age who are studying at accredited educational institutions in the Czech Republic, sportspersons, accredited persons working with the news media and others. When filing an application for the issue of an Employee Card (of a non-dual character), the foreigner is required to prove that he/she has free access to the Czech labour market. On the other hand, he/she is not required to provide a document proving his/her expert capabilities or his/her education. Neither must his/her job be included in the register of vacancies available to Employee Card holders.

The other example where the Employee Card is of a non-dual character and only comprises a Residence Permit, is the situation in which the law stipulates that the foreigner must have a separate Work Permit, for example if he/she was seconded by his/her foreign employer based outside the EU/EEA or in Switzerland to perform work in the Czech Republic, or if he/she is a seasonal worker doing work dependent on changing seasonal conditions, which may not last for more than six months in the calendar year, and trainees (arriving to gain special skills

and qualifications) for no longer than six months. In those cases, the foreigner must first obtain a Work Permit (or at least have filed an application for one to be issued) and after that apply for an Employee Card that would entitle him/her to remain in the country – the same system as existed before the Amendment came into force and which instituted the Employment Card model.

However, even in the above-mentioned cases, the foreigner must always inform the Labour Office of the Czech Republic, the same as EU citizens.

■ BLUE CARD

Also the “Blue Card” concept is a combination of the Work Permit and Residence Permit, however, only for highly qualified foreigners. The high qualification requirement is fulfilled if the university or higher technical education for the duration of at least three years is required for the working position concerned. Blue Card applications may be filed with a Czech representation of office abroad, alternatively with the Ministry of the Interior, provided the foreigner is already staying in the Czech Republic on the basis of a permit issued by a Czech authority, or if he/she holds a Blue Card issued by another EU state and his/her application has been

filed within one month of his/her entry to the territory of the Czech Republic.

The application for the issue of a Blue Card must be supported by an employment contract for work requiring high qualification, for the duration of at least one year, for statutory weekly working hours. The employment contract must further stipulate the amount of the contracted gross monthly or annual salary, which must be at least 1.5 times the average gross salary in the Czech Republic.

The Blue Card is valid for the duration of the employment contract plus three months, but no longer than for two years. The Blue Card may be extended. The time limit for the decision on the issue of a Blue Card to be delivered to the applicant is 90 days within the filing of the application (in specific cases, the time limit may be prolonged or interrupted).

Blue Cards have several advantages for their holders, e.g. the possibility of free movement within the EU after the lapse of the 18 months’ legal stay, the possibility of including the period of stay on the basis of the Blue Card in the case of the person concerned applying for a Permanent Residence Permit in the Czech Republic, and more favourable conditions applying to their family dependants in seeking permission for their stay in the Czech Republic.

Ondřej Chlada

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MORE INFORMATION CONCERNING THE EMPLOYMENT OF FOREIGNERS CAN BE FOUND ON THE FOLLOWING WEBSITES:

www.mpsv.cz – Ministry of Labour and Social Affairs of the Czech Republic

www.mzv.cz – Ministry of Foreign Affairs of the Czech Republic

www.mvcr.cz – Ministry of the Interior of the Czech Republic

Energy Industry – Backbone Sector of Czech Economy

Historically, the energy industry has been and will continue to be the backbone sector of the Czech economy. It creates conditions for the successful functioning of the other industrial sectors and thus also impacts decisively on Czech exports and their competitiveness. The dynamic changes connected with the liberalisation of the European energy market, the EU energy policy and the roll-out of new technologies also represent challenges and opportunities for the Czech Republic in setting a modern and strong energy industry for the new millennium.



■ CONSUMPTION AND ENERGY MIX OF THE CZECH REPUBLIC

The Czech economy is highly energy intensive compared with the other EU countries. The high intensity is partly caused by the structure of the economy, which is focused on industry, but the energy consumption per unit of GDP is high, even if measured against comparable economies (e.g. 2.75 x higher than in Germany). Although energy consumption has fallen in the last few years, this has been so mainly because of the economic slump. It can be expected that, despite the moderate economic recovery, consumption will rather stagnate in future, due to the above-mentioned potential of savings.

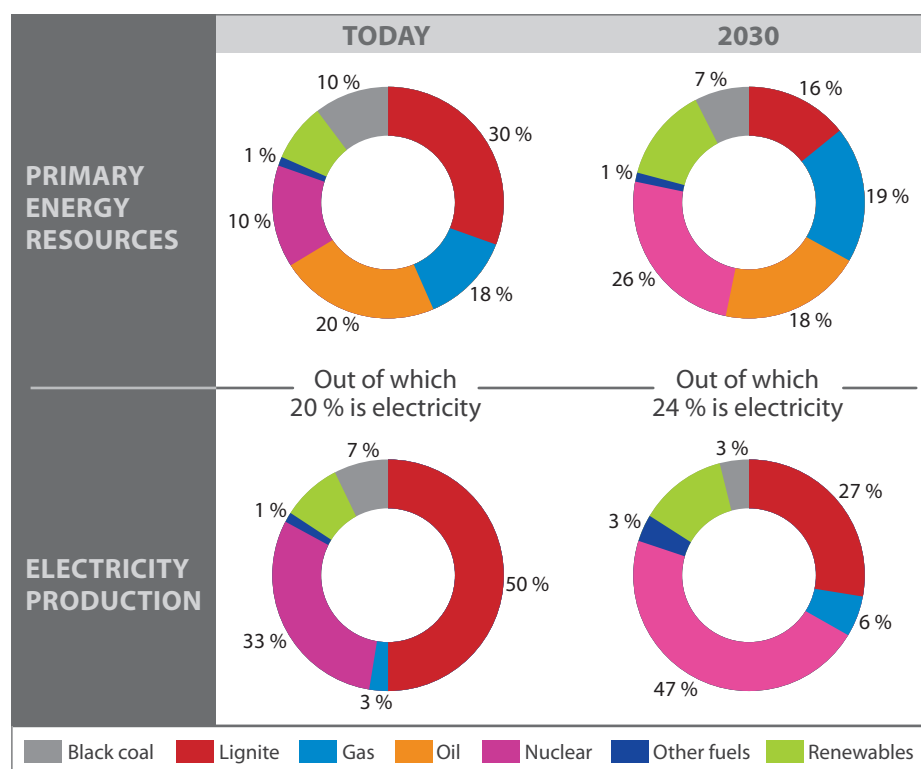
Historically, domestic reserves of brown coal have been used to ensure electricity and heat production, but its accessible reserves are insufficient in the medium term, and production units using this coal are mostly approaching the end of their technical service life and require investment in their renewal. A great role is simultaneously played by nuclear power, which accounts for one-third of the overall electricity generation. Last but not least, it is necessary to mention renewable energy sources, the installed capacity of which (especially in photovoltaic power plants) has significantly increased in the last few years, as a result of the generous state support. However, the boom in renewables has ceased since 2011, following cuts in the

purchase prices guaranteed by the state. Despite this, the Czech Republic is fulfilling the targets of renewables' share in total consumption set by the EU.

■ PRESENT STATE OF ENERGY SEGMENTS AND OVERALL BALANCE

However, from the viewpoint of the European market, the development of renewables has significantly affected electricity

wholesale prices. Due to the subsidies and the preferential access of renewables' units to the power grids, these sources with a cheap but volatile production squeeze out the classic (coal- and gas-fired) power stations, mostly thanks to their low variable costs. The low wholesale prices then result in limited investment in the stable conventional power plants, which increases the risk of instability of the electric energy system,



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and blackouts. The projected consumption and the end of the service life of the existing sources, at the same time, imply the need for the construction of conventional power plants and thus it is probable that thermal and nuclear power stations will constitute the basis of the energy mix in the Czech Republic. However, it remains to be seen who, and under what conditions, will invest in these necessary sources.

Investment is also needed in the sector of heat generation, which has a unique position in the Czech energy industry. The Czech Republic has well-functioning systems of central heat supply in place, but they will require considerable investment in renovation and ecologisation in the near future. The heat industry in the Czech Republic is mostly based on generation from brown coal, which raises the question of the future of its mining, or rather the breaking of the mining limits. A certain potential in this respect is represented by local co-generation units, which will gain in importance.

In the gas industry, the Czech Republic, like a number of European countries, depends almost fully on the import of natural gas from abroad, with more than two-thirds of the import coming from Russia. Owing to its good transit infrastructure, the Czech Republic maintains its important role of a transit country of Russian gas to Western Europe and develops its transit system with a view to diversifying supplies and increasing their reliability. More than a half of the households are currently supplied with gas in the Czech Republic. Gas is used especially for heat generation. Its use in transport is increasing and its potential is also reckoned with for the co-generation units in future.

The Czech Republic is largely self-sufficient in terms of energy security and balance. More than a half of domestic energy consumption is covered from local sources and the Czech Republic thus imports only natural gas and oil. Thanks to the thus far sufficient coal and nuclear sources and a stable transmission network, the Czech Republic is a major electricity exporter. However, the exit of Germany from nuclear power, the development of renewable sources and the related networks' overload and, last but not least, the aging production base, limit the possibilities of export. The Czech Republic thus faces a decision on how to set its sustainable energy mix for the long term, and

under what conditions. This question is to be answered by an updated State Energy Concept, but its approval has been postponed several times in the last few years for political reasons, as well as because of the high degree of uncertainty regarding the orientation of the European energy policy. Therefore the objectives of the 2030 State Energy Concept are only indicative and do not provide a clear guideline for investors.

■ EFFECTS OF LIBERALISATION FOR MARKET PLAYERS AND CONSUMERS

In the last decade, the Czech energy market has experienced a liberalisation process in accordance with the EU rules. In the energy chain, fully liberalised segments with full competition (power generation, trade) and regulated segments (transmission and distribution) have thus arisen. As a result of liberalisation, platforms have been founded for free trade in energy, and at the same time an independent regulator has been established for the creation and supervision of the rules in the energy market and for its players.

Due to the liberalisation, the enforcement of European regulation, and new technologies, the roles of the traditional players in the energy market have changed as well. The former monopolies, such as the ČEZ Group and RWE Transgas, are losing their positions in their traditional markets as a result of the entry of new players and are compelled to seek new models and areas of business. For example, ČEZ, a traditional electricity supplier, has extended its offer to include gas, heat, energy services, and even the offer of mobile phone calls. Besides new players in the liberalised segments, new entities are also entering the regulated sectors, such as transmission and distribution. The latter are mainly financial investors, who become strategic partners to traditional players. Examples of these are the Australian Macquarie fund, which has acquired a 35% stake in the gas distribution network from RWE, and Germany's Allianz and Borealis, which own the Net4Gas gas transmission pipeline operator.

However, despite the greater competition and stricter supervision by the regulators, final consumers do not profit much from the market transformation. The final energy prices continue to rise, due to the support



for renewable energy sources and the need to finance the renovation and development of the network infrastructure. These costs, which are transferred to the end consumer by means of regulated levies included in the final energy prices, account for over a half of the total price and can scarcely be influenced by the consumer.

■ TRENDS IN EUROPEAN ENERGY INDUSTRY AND THEIR IMPACT ON THE CZECH MARKET

Trends in the energy sector are caused mainly by the market regulation and setting which follow from the EU energy policy, and at the same time by technological development. The European Union aims for the 20/20/20 target, which significantly impacts on the Czech energy industry, and which binds the member states in different degrees to reduce CO₂ emissions, increase the share of renewable sources and lower energy intensity, each by 20%, with a trajectory set until the year 2020. The inadequate co-ordination of support for the achievement of the aforementioned ambitious goals



causes significant market deformations and increases the risk of unreliable supplies. Furthermore, discussions are currently being held on changes in this policy and the setting of its objectives up to the year 2030. However, regardless of the outcome of the EU member states' negotiations, this trend forces European utility companies to change their present business models and face the risks stemming from the nuclear development in the sector.

One of the other trends is the development of decentralised electricity sources, especially renewables (photovoltaic and wind power plants) and small co-generation units, which increases the load on the grid and makes higher demands on its operation. The volatile renewable sources particularly increase the need for the back-up sources of classic power stations, where

these reserves may not suffice in future. This will require additional investment in the development of networks and back-up capacities. Pure end consumers of energy are simultaneously also becoming producers, and this leads to changes in the overall model of functioning of the energy market and to changed demands on the functioning of the network infrastructure of the system. This development will make it necessary to change the tariffication model, while at the same time the issue of limiting the privileged access of renewable sources, and thus their equal status with other sources, should be resolved.

A solution to the new mode of the networks' operation can be provided by the development of smart grids technology, which is able to dynamically control the unstable load on the grid and thus ensure reliable

energy supply. In this respect, the Czech Republic can build on the foundations of the HDO technology which is already being applied, but no smart grid development is possible without amendments to the model of payments for the networks and without additional investment.

Customers themselves react to the above changes by their efforts to reduce their consumption by introducing energy-saving measures. Despite the development of the programmes in recent years and government support for these measures (e.g. the Green Savings programme and support for innovation and modernisation of production capacities), there is a significant potential for development in this area, e.g. in public lighting.

■ IMPLICATIONS AND OPPORTUNITIES FOR INVESTORS

There are a number of opportunities for investors in the energy sector of the Czech Republic, whether in production and sale, the network infrastructure, or energy services.

The area of energy services offers a potential, especially in the support of consumers to increase energy efficiency. The EU goals, the government subsidy programmes and the great saving potential promise development in this market segment in future. Another opportunity is the participation in investment in the network infrastructure. Not only technology suppliers but also entities which provide their funding can play a role in this area. A similar potential is represented by the segment of electricity production, but the risks are higher here, given the unclear setting of the energy concept and parameters of the European energy policy. Owing to liberalisation and the changing business model, opportunities for entry into the energy market of supply to end consumers are also open to entities from other sectors, such as banking, telecommunications and technology companies. The Czech energy industry now faces a number of challenges which represent the potential for interesting investment opportunities. However, it is necessary to evaluate the risks involved and to remember to manage them in the implementation of the investment and development projects.

Dean Brabec

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Arthur D. Little, founded in 1886, is a global leader in management consultancy, linking strategy, innovation and technology with deep industry knowledge. We offer our clients sustainable solutions to their most complex business problems. Visit us at www.adlittle.cz

The Czech Republic on the Way to Making Sophisticated Use of Pure Technologies

In the era of industrial boom, the main source of power in what is today the Czech Republic was coal. At that time, the priority was economic development, while environmental considerations were pushed into the background. Over time, the world came to see that such an approach was untenable.

Although tending towards renewable sources is a clear vision, the Czech power industry is now finding itself at a crossroads, where investors are waiting for the government to decide which way to go. After the cancellation of the tender for the enlargement of the Temelín nuclear power station, or rather its postponement, the question has been raised as to whether nuclear energy was the right thing for the Czech Republic. Here, the figures speak for themselves. Even though the percentage representation of renewable energy sources is growing, it is far from being capable of substituting the capacity of nuclear power stations, which account for more than 30% of the total energy output in the Czech Republic.

■ COMMITMENT OF THE EUROPEAN UNION

In spite of this, small hydroelectric power stations, wind and solar power stations and power stations using biomass or other facilities based on renewable energy sources, will play an important role in the near future. This is in line with the policy of the European Union, which has committed itself to reduce CO₂ emissions by 40% in comparison with the 1990 level by the year 2030. The financial support of renewable energy sources

from the state last year amounted to CZK 44.3 billion (approximately EUR 1.7 billion), and this year the support is expected to be about the same. This trend can also be seen in statistics and the proportion of renewable energy sources in the total electricity consumption in the Czech Republic. While, in 2008, only a little more than 5% of electricity was generated by renewable sources, in 2013 it was more than 13%.

The plan is to give more support to research and development with regard to the use of renewable energy sources and energy storage. In this respect, the new government can link up with the 2007-2013 programming period and the support made available by EU structural funds, whereby several research and technological centres concerned with power generation were built, for example, the Centre for the Research and Use of Renewable Energy Sources (CVVOZE) in Brno, the RICE Regional Innovation Centre for Electrical Engineering in Plzeň and the Nupharo Park Scientific Centre in the north of Bohemia.

■ MORE THAN CZK 7 BILLION DISTRIBUTED TO ENVIRONMENTAL PROJECTS BY CZECHINVEST

The support from European and national subsidy programmes significantly assists in meeting the set target. Financial means for reducing energy costs, the purchase of more economical technologies and energy production from renewable sources were made available to businessmen by the Eco-energy Programme, part of the Enterprise and Innovation Operational Programme 2007-2013, administered by CzechInvest Agency. The Agency has already supported 1222 such projects, among which more than CZK 7.4 billion (approximately EUR 285 million) was distributed.

As in the past, the priority of the Czech Government will be energy-saving projects. Having learned a lesson from the failed photovoltaic power station project and the half-hearted beginnings of pure technologies in the Czech Republic, we are now awaiting with great anticipation the inclusion of more advanced methods for the use of renewable energy sources in the energy-saving plans of enterprises and households within the framework of the new Energy Management Policy.

CzechInvest,
the Investment and Business
Development Agency

USEFUL CONTACTS:

Centre for the Research and Use of
Renewable Energy Sources (CVVOZE)
www.cvvoze.cz/
Regional Innovation Centre for Electrical
Engineering (RICE)
<http://rice.zcu.cz/cz/index.html>
Nupharo Park Scientific Centre
www.nupharo.com/



MODERNISATION OF HYDRO GENERATORS

In the last decade, Hansen Electric spol. s r.o., in connection with the expansion of support for green energy and increased demand for reconstruction and modernisation of hydroelectric power plants, has been involved in large-scale repairs and modernisation of hydro generators, both in the Czech Republic and in Southern and Eastern European countries.

THERE ARE SEVERAL REASONS FOR HYDRO-ELECTRIC POWER PLANT MODERNISATION:

1. To increase the reliability of the entire facility - a lot of hydroelectric power plants have been in operation for many decades; the oldest generator that the company has modernised was from the year 1926.
2. To get a better purchase price for electricity from modernised equipment.
3. To increase the performance of the power plant - with the particular hydraulic profile of the entire waterworks and the particular maximum performance of the turbine, the only way to increase performance is to modernise the generator using new technology and materials, which increases the effectiveness of the generator.

It is necessary to realise that hydro generators that were thirty years old, fifty years old or older have been constructed with maximum use of materials and technology from the time of their construction. However, today we are technically further along, and the use of new technology enables

an increase in the performance of existing generators, while maintaining existing construction designs and dimensions. We currently have available much better materials for the magnetic circuits of generator stators. For each modernised generator, a complete electromagnetic calculation is performed, which is optimised in view of the maximum efficiency of the generator.

It can be stated in conclusion that if calculation is done properly and high quality generator repairs are performed, we can achieve up to several percentage points better efficiency. Although it does not much appear to be the case at first glance, a generator with a regular design with active performance of 5 000 kW works at an increase of efficiency by only 1% and operation after 3/4 of a year with increased production of electricity with unchanged output of the turbine of 328 500 kWh per year. This additionally produced energy, multiplied by the purchase price, results in an increase in profit, which significantly reduces the time it takes to earn a return on investments while increasing the reliability of the equipment.

PRODUCTION PROGRAMME – ELECTRIC MOTOR DIVISION

- production, general repairs and servicing of synchronised generators of both low and high voltage up to 10.5 kV and output of 15 MW
- production of new electric motors in a non-explosive design
- general repairs of alternating electric motors of low and high voltage
- general repairs of electric motors in non-explosive design Exd I
- repairs of unidirectional electric motors of mining machines and rotation alternators (Ward-Leonard sets)
- servicing and repairs directly at the position of the machine
- vibro diagnostics
- thermovision
- balancing
- laser alignment
- diagnostics of a winding state



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Impact of New Legislation on Energy Contracts

On 1 January 2014, more than 20 years after the 'Velvet Revolution' that peacefully overthrew the communist regime and ushered in a new era of democracy, Czech private law experienced a revolution of its own. In a sweeping change, the new Act No. 89/2012 Coll., Civil Code (NCC), Act No. 90/2012, Coll., on Business Corporations, Act No. 91/2012 Coll., on Private International Law and other acts replaced the former Civil Code, Commercial Code, and more than 200 other acts. And, as is usual after a revolution, there is a lack of certainty when dealing with the new regime.

■ INTRODUCTION

In this article, we will consider recent changes in Czech private law that, among other things, affected consumer energy contracts (B2C). In particular, we note the impact of the NCC, its relation to Act No. 458/2000 Coll., Energy Act, and to the Directive 2011/83/EU on Consumer Rights (Directive). Considering the future of the issues we discuss, we will address how the legal framework may be changed by a proposed amendment to the Energy Act which was introduced in mid-June 2014.

As a general matter, the NCC has introduced numerous changes and new legal principles beyond our current focus, which now govern Czech private law. Key changes may be relevant for your business, especially when concluding contracts, irrespective of

their subject matter, i.e. wholesale as well as retail, with suppliers as well as with customers. Just to highlight a few: (i) contractual freedom has been significantly broadened; (ii) the possibility of challenging the validity of a contract for lack of form or absence of essential features is diminished and (iii) pre-contractual liability of a party that unreasonably withdraws from negotiation or conclusion of a contract is newly introduced.

■ 1. CONSUMER ENERGY CONTRACTS IN 2014

Prior to 1 January 2014, energy contracts were regulated by the Energy Act and the old Civil Code was used as a backbone for general Contract Law issues. In legal terms, the Energy Act was *lex specialis* to the old Civil Code. However, since 1 January 2014, uncertainty has arisen regarding the question of the legal relationship of the NCC to the Energy Act, especially when it comes to the question of consumer contracts for supply of energy and deadlines for withdrawal from these contracts.

In order to address the critical issues that have emerged under the new legal regime, it is important to understand the three types of consumer contracts that are distinguished by the means of their conclusion: (i) 'normal' consumer contracts, (ii) distance contracts (concluded, e.g., via Internet or telephone) and (iii) off-premises contracts. We will focus on the latter two 'special' types.

1.1 Distance contracts

Under the NCC, distance contracts may be withdrawn from within 14 days from (i) the day of conclusion of the contract or (ii) within 14 days after first supply (in the case of a contract for a repeated supply). Since con-

sumer contracts for supply of energy are, by their nature, a repeated supply, the question has arisen among energy entrepreneurs: "In which 14 days may the consumer withdraw from the contract?"

This question was actively discussed among legal specialists. Given the recentness of the NCC, there is a lack of relevant case law to reflect an authoritative view and to support one of the interpretations. We therefore welcome the draft bill amending the Energy Act, as this issue is addressed in more detail. Under the draft bill, the period for withdrawal is unified for distance and off-premises contracts, as discussed below.

It is important to mention that the Directive, which is applicable to any contract concluded between an entrepreneur and a consumer and also applies to contracts for the supply of water, gas, electricity or district heating, explicitly states that the consumer may withdraw within the period of 14 days from the day of the conclusion of the contract. The Directive further states that Member States shall not maintain or introduce provisions diverging from those laid down in the Directive, including more or less stringent rules. The Directive was implemented into Czech law and could serve as an interpretational tool when dealing with similar issues.

1.2 Off-premises contracts

Off-premises contracts, i.e. contracts concluded outside the usual place of business of the supplier, are currently governed by both the Energy Act and the NCC.

As mentioned above, under the NCC a consumer may withdraw from a contract for supply of energy within 14 days. However, the Energy Act provides another possibility when it stipulates that (i) a consumer or (ii) an individual conducting business may withdraw (without any sanction) from an off-premises contract until five days before commencement of the supply of electricity/gas.

One interpretation that would resolve this issue would be to apply only the Energy Act as it remains *lex specialis* to the NCC. This leads to the conclusion that a consumer may withdraw from the off-premises contract until five days before commencement of the energy supply. This result seems to be in contradiction with the Directive and such outcome lacks any reasoning as to why off-premises contracts should be treated any differently from distance contracts.

Again, the draft bill amending the Energy Act should resolve this issue as it unifies the period in which it is possible to withdraw from both types of these consumer energy contracts.

1.3 Unilateral changes to business terms & conditions

The NCC introduced the possibility for an entrepreneur to change its business terms and conditions unilaterally, if such possibility was pre-agreed in the contract. Such pre-agreement must contain the means of notification and explicitly entitle the other party to reject new terms and conditions and to terminate the contract with a notice period long enough to allow the customer to obtain an equivalent supply from another provider.

The NCC merely reflects provisions already set forth by the Energy Act. Although the Energy Act does not explicitly allow them, it already anticipates the possibility of unilateral changes to contractual terms. The Energy Act provides for the possibility of withdrawing from a contract due to a unilateral change to the contract or a change to the price for the supply of electricity/gas. If a customer is notified of such upcoming change no later than 30 days before the effective date of the change, and, at the same time, is informed about the possibility of withdrawal from the contract, the customer may then withdraw from the contract no later than 10 days before the effective date of the proposed change. If, on the other hand, the supplier does not notify the customer about the upcoming changes to the contract or pricing, the customer is then allowed to withdraw from the contract within three months after the effective date of such change. If the customer chooses to withdraw from the contract, no financial penalties may be imposed.

As these provisions of the Energy Act are compatible with the NCC, the draft bill amending the Energy Act omits any proposals in this regard.

■ 2. AMENDMENTS TO THE ENERGY ACT

2.1 Promotion of renewable energy sources

On 21 May 2014, an Amendment to the Energy Act and the Act on Promoted Sources of Energy came into force. The key purpose of this Amendment was to remove slight dis-

RELEVANT LEGISLATION

Act No. 89/2012 Coll., Civil Code

Effective as of 1 January 2014, this Act encompasses the entire body of private law, including Contract Law, Property Law, Damages, Consumer Protection and Family Law. The Act sets aside former dualism between commercial and civil law and emphasises consumer (or weaker party) protection.

Act No. 458/2000 Coll., Energy Act

The Act stipulates conditions and requirements for energy businesses and the energy sector, e.g. energy licences, energy contracts, regulatory framework and unbundling regime.

EU Directive 2011/83/EU, on Consumer Rights

The Directive sets out consumer protection rights, withdrawal periods, and rules for concluding off-premises and distance contracts. Provisions of this Directive shall apply to contracts concluded after 13 June 2014.

crepancies related to a price to cover costs associated with the promotion of electricity as one of the components of the regulated electricity price. The amended Energy Act now clearly provides that energy traders are obliged to collect this price component directly from customers.

2.2 Newly proposed draft bill amending the Energy Act

Another amendment to the Energy Act was introduced on 12 June 2014 and may now go through the legislative process. If this draft bill is adopted in the proposed wording, it will come into effect on 1 July 2015 with only one exception (see below). This draft bill implements EU Regulation 1227/2011 on Wholesale Energy Market Integrity and Transparency (REMIT), EU Regulation 347/2013 on Guidelines for Trans-European Energy Infrastructure, and EU Directive on Consumer Rights 2012/27/EU on Energy Efficiency. With respect to wholesale energy products, the draft bill stipulates fines for non-compliance with duties and restrictions imposed by REMIT, i.e. registration and reporting requirements, as well as prohibition of insider trading. It is proposed that fines will be imposed by the Czech Energy Regulatory Office (ERO) and may amount to up to CZK 50 000 000 (approx. EUR 1 850 000). The draft bill also introduces legal rules and the

authority for the establishment, functioning and powers of the Council of the Energy Regulatory Office (CERO), including the conditions for membership of the CERO and the term of office of its members. CERO should be formed as a new body at the ERO and will be responsible for approving strategic policies and actions of the ERO as well as exercising supervision over the activities of the ERO. If amended by this draft bill, the provision of the Energy Act forming the CERO will become effective on 1 September 2017.

2.3 Proposed changes to consumer energy contracts

Difficulties regarding the applicability of the NCC described in this article will hopefully be resolved by the draft bill amending the Energy Act as introduced on 12 June 2014. Although the draft bill proposes that the Energy Act will, quite logically, govern withdrawals from both distance contracts and off-premises contracts, it introduces periods in which the consumer would be entitled to withdraw that differ from the 14-day period stipulated by the Directive as well as by the NCC. Relevant provisions of the Energy Act, if amended by the draft bill, stipulate that consumers have the right to withdraw from the contract during the period starting from the date of conclusion of the contract and ending on the 14th day after first supply of energy. A withdrawal delivered to the supplier less than 10 days before the first supply or after the first supply will be effective only after a lapse of the 14th day after the receipt thereof, unless the consumer sets a day of effectiveness of the withdrawal after this date. If the supplier has already initiated the supply of energy, the consumer will pay a proportional price for the energy already provided until the effective day of the withdrawal.

We believe that such a new legal regime, which is also more favourable to consumers in comparison to the Directive, would create greater legal certainty and would answer numerous questions of energy entrepreneurs regarding what regime and period apply to energy contracts concluded with consumers via distant means and/or outside of their usual business premises.

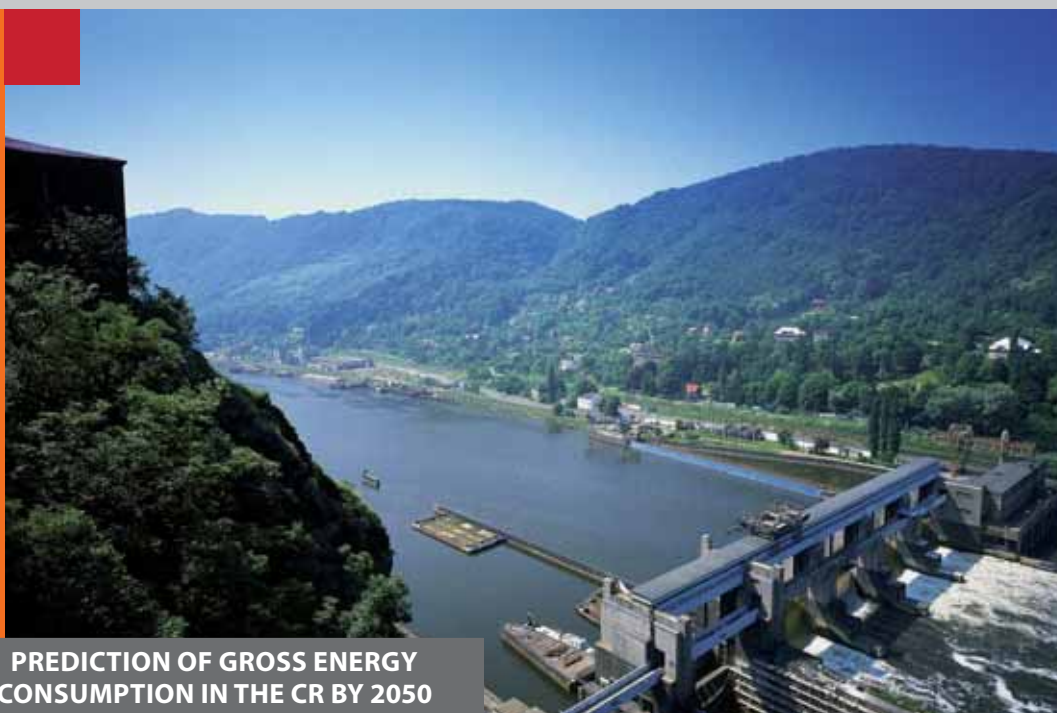
Jana Krautwurmová, Jan Tylš

Advokátní kancelář WOLF THEISS

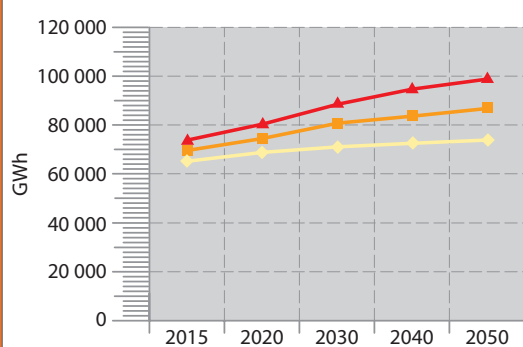
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The Structure of Power Generation in the Czech Republic is Very Advantageous in Terms of Energy Security and Output Diversity

Not only the Czech Republic, but also the European Union find themselves at a crossroads in the energy industry. A non-systematic climate policy and renewable sources policy can harm the sector, but the Czech energy industry still has a chance today of a reasonable future, transformation and the preservation of its competitive advantage. We met Ms Zuzana Šolcová, Executive Director of the Association of Energy Managers, to discuss where the Czech energy industry is heading.



PREDICTION OF GROSS ENERGY CONSUMPTION IN THE CR BY 2050



Source: EGÚ Brno, ERÚ

In your opinion, what will the future direction of Czech energy production be? What is the basic prerequisite for the development of the Czech energy sector?

The Czech energy industry will definitely head towards a reduced share of fossil fuels, an increased role of small decentralised sources, and also to reduced exports, a balance as well as the application of the elements of intelligent networks, though in a more pragmatic and less 'shock' style than e.g. in Germany. These are objective tendencies. It will head towards a higher share of renewable sources as well as natural gas at the expense of coal, which will gradually disappear, especially from 'big' power production. In my opinion, the basic prerequisite of further development is particularly stable legislation and regulation, and a rational, non-ideological approach to the energy industry. And, naturally, the maximum possible inte-

gration into the wider European market, but this is not only up to us, but also up to the wider surroundings. Maintaining or increasing the share of nuclear power would be practical, especially from the economic and security points of view, but a clear energy strategy, and particularly the will of the state to implement it, is required for this.

Has the energy sector in the CEE area entered a new era? What is the reality in the present energy market?

A few years ago, it definitely entered an era of immense instability. The situation has been similar in all of Europe. However, in Central Europe it is most marked, mainly because of the effect of the German energy policy. Excessive intervention in the market (renewables support, ordered shutdowns of nuclear sources, support for gas-fired power stations, selective tariffs for services and

renewables' support, regulated electricity prices, preferential rights of access, forced introduction of new technologies before achieving their maturity, and many others) has practically caused disintegration of the market model that was built up over 18 years. Electricity prices are well below the level of long-term costs, investment in sources has practically ceased without market guarantees. The price of the commodity is falling, while the final price for the consumer is rising and exceeding that of global competitors, thus jeopardising the competitiveness of the industry. The spread, i.e. the differential between peak and base electricity prices, is becoming lower. This further reduces the motivation to operate peak capacities, although the need for them is increasing along with the rise in renewable sources. The market has simply ceased to function and is being replaced by regulation.

Are the national energy policies within the EU sufficiently coordinated?

Absolutely not. They are not coordinated at all. So far, no one has tended towards it. According to the European legislation now in effect, each EU member state has a sovereign responsibility for supply security and, under the Lisbon Treaty, the choice of the mix of energy sources is a national competence. Simultaneously, however, there is the requirement for a single interconnected market where a free movement of electric-

ACTIVITIES OF SIGMA GROUP a.s. INSIDE POWER GENERATION INDUSTRY

The SIGMA GROUP a.s. Concern with registered office in Lutín follows up the famous tradition of pump production in the Czech Republic going back to 1868. Considering the power generation branch, first supplies of pumps were performed in the 1930s. Starting in the latter half of the 20th century, the company's production has been massively focused on supplies of pumps for power generation industry. An independent Supply-Engineering Unit was established in the 1970s in order to ensure supplies of investment units. New pump designs were introduced, mainly designed for boiler feeding at thermal units 100 MW, 200 MW, 350 MW and 500 MW. In the late 1970s, pumps for nuclear units of VVER 440 MW and later VVER 1000 MW were designed and produced.

The SIGMA company of Lutín has been involved in supplies of pumping technology to all thermal power plants in former Czechoslovakia (Tusimice, Ledvice, Pocerady, Detmarovice, Chvalětice, Vojany, Novaky and others) as well as for nuclear power plants (NPP) of VVER system (Jaslovské Bohunice, Dukovany, Mochovce, Temelin). Foreign supplies have included thermal units in Europe and overseas e.g. Brasil, Argentina, Egypt, China, Pakistan, Turkey, Japan, India, Russia, Poland, Romania, former Yugoslavia, Ukraine, and Cuba. Nuclear supplies have been oriented to Russia, India, and Ukraine.

Nowadays, the nuclear activities are currently performed within the project of NPP Mochovce34 completion project (Slovakia) or in the project of NPP Dukovany, CZ (emergency sprinkler pumps of nuclear island). New generation of Russian VVER 1200 NPP are being supplied by SIGMA pumps (NPP Novovoronezhskaya, NPP Leningradskaya).

The SIGMA GROUP a.s. Concern supported by its domestic subsidiaries SIGMA DIZ, Sigmainvest and SIGMA ENERGO and foreign sales offices SIGMA SLOVAKIA, SIGMA POLSKA, SC SIGMA UKRAINE and OOO SIGMA RUS ensure a complex portfolio of services, supplies, and maintenance in various pump systems of the whole water management of thermal or nuclear power plants:

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- Cooling pumps covering flow rate (Q) up to 18 000 l/s
- Raw water pumps
- Fire water pumps for in the and series
- Heat distribution system pumps
- Turbine oil system pumps

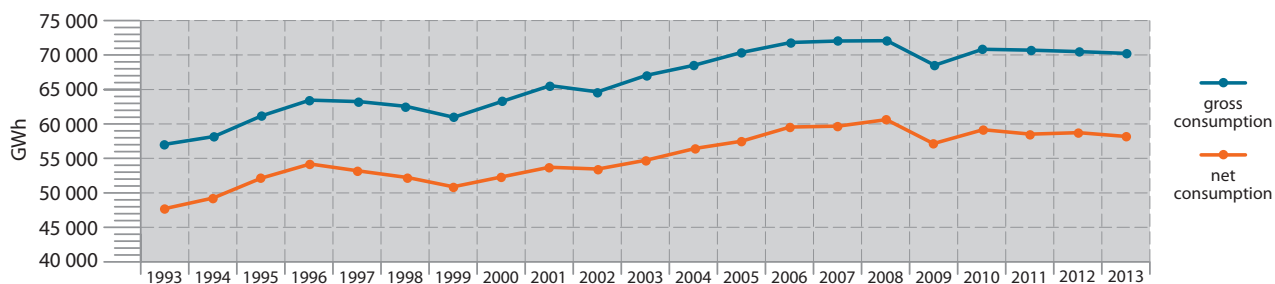


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ELECTRICITY CONSUMPTION IN THE CR (1993 - 2013)



ity is ensured, and its transmission is even free of charge, which is quite a paradox. If the market distortions did not exist, then such an arrangement would bring optimum market conditions in the long term. However, in the present state of affairs, it is actually a battle of the state interventions of the specific countries with one another. An attempt at coordination has only been initiated with the new framework proposed by the European Commission.

The Czech energy industry has a high degree of self-sufficiency in power production. But what is the situation in terms of structure?

From the viewpoint of energy security and output diversity, the structure is very advantageous. We have a high share of regulatable sources and back-up capacities, so that we are more resilient than most other states. We have an almost 100% coverage of electricity production by domestic or quasi-domestic (nuclear) sources. The situation is different regarding environmental aspects and in particular CO₂ emissions, where the dominant role of coal is a drawback. And a disadvantage is also the average age of the sources, which requires a massive transformation during the next 15 years.

Do you agree with the assertion that the European energy policy impacts on the Czech industry rather negatively and that the conditions for the different EU member states are not equal?

Yes, unfortunately this is so. The Climate and Energy Policy has so far had many more negative impacts on the new member states compared with the old ones. These include the impacts of the costs of reducing CO₂, the share of renewable sources, and the costs of energy saving. This was also proved by the assessments carried out by the European Commission. Furthermore, in some cases, violations of the European rules by large European countries are tolerated, while the Czech Republic would probably encounter problems with this. A typical example is the relief for industry applied in Germany and France, which was 'forbidden' to the Czech Republic on the part of the European Commission. The regulation of electricity prices in France would probably not be tolerated in the same way relative to the Czech Republic either.

Given the growing uncertainty on the energy markets, the further drop in electricity wholesale prices, and the confirmation of the Czech Republic government that they do not at the moment plan to

provide guarantees for the construction of new nuclear sources, the ČEZ firm have decided to cancel the tender for the construction of the third and fourth units at the Temelín Nuclear Power Plant. Do you believe this decision was correct?

Although I understand the concerns that have led the ČEZ management to take this decision, personally I believe that, while it was the easiest decision, it was an insufficiently farsighted one. We have thus lost several years in the start of the construction of new nuclear sources that may sorely be missed by the end of the 2020s. We will definitely survive, but this will require additional costs, complications and, in the case of the gas version, also result in lower energy security and increased dependence on foreign sources. I understand the political reasons and the problems in terms of financing which led to it, but I think that political courage and long-term responsibility were lacking. I hope that, with regard to the way the government decision was conceived, a strategy for nuclear power development will be drafted by the end of the year and the process will be restarted in a new form next year.

What are foreign investors in the power industry to expect if they want to enter the Czech market?

I would not say there is anything specific about the Czech energy market. Investors should be prepared for high regulatory risks in the energy industry in power production. A regulated market which does provide some certainties is better and the new draft energy legislation aims at greater stabilisation. However, the Czech Republic has specific permission procedures, which are more complex, worse and less stable than those in some neighbouring countries. On the other hand, the aging of the production sources is an irreversible fact and investors taking the risk may reap considerable advantages in the long term. In any case, this has not been a stable and low-risk sector for many years, and will not be transformed into one in the near future.

Jana Pike



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under construction in Poland, Germany, Sweden, Finland and Turkey, followed by India, Chile, Columbia, Uruguay and Panama. Last year, for example, five turbines were put into operation in Israel and several more in Turkey. In the Czech Republic, the firm is completing the project of a power station at Ledvice with a 660 MW steam turbine with above-critical parameters, and is modernising 1000 MW steam turbines in the Temelín nuclear power station. We have put into operation a gas and steam turbine in Počerady and are completing a power station in Prunéřov with 3x250 MW turbines. The company also modernises the turbines of other manufacturers, which is an important segment of its business activities. Thanks to modern technologies and our perfect re-engineering skills, we can modernise different makes of turbines. Currently, we are busy modernising turbines in power stations in France (in Gardanne) and Finland (Loviisa nuclear power station). We also have turbines for solar power stations and are currently working, together with a partner, on the pilot projects of solar blocks in Australia and Chile.

Being a member of the Doosan Group has helped us to enter new markets and address new customers, and has given us the chance to seek possibilities of placing our industrial turbines in the demanding American and Canadian markets. This is a very prestigious matter for us.

In comparison with large companies, our advantage is, paradoxically, the fact that we are a smaller firm, and are therefore more flexible in approaching our customers, both

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Ecology and Energy Saving in the Focus

Refrigerating and air conditioning equipment plus the heat pump segment are a forward-looking area, where Czech firms also have their share.



Two main trends currently influence this sector, which are linked with greenhouse gas emission reduction efforts. The EU is strongly pressing for the use of coolants having no or just a small effect on global warming, and at the same time for reducing electricity consumption. Manufacturers are seeking optimum solutions to link these two aspects. In the Czech Republic, there are many foreign investors, such as Valeo Heat Exchangers (part of the French Valeo Concern), which manufactures heat exchangers for air conditioning systems used in cars, Valeo Compressor Europe, specialising in the manufacture of rotating and sand-blasting air compressors for air conditioning systems used in cars, and Visteon-Autopal, which develops and manufactures air conditioning and cooling system components for the automotive industry. Czech firms are not lagging behind in this respect.

■ IMPORTANT CZECH COMPANIES OPERATING IN THE SECTOR

Carrier chladicí technika is a leading firm in the area of commercial cooling systems in the Czech and Slovak Republics. It provides comprehensive solutions for cooling technologies for all the food-processing retail and wholesale formats from the smallest C-stores up to the largest hypermarkets, and

from technical design to project preparation and realisation, complete with guarantee and post-guarantee service.

From the very beginning, Sinop CB joint stock company has been concerned with the manufacture and supply of the broadest range of cooling equipment. It supplies products from the smallest beer cooler up to large cooling systems used by hypermarkets and other facilities, including offshore oil platforms. Most of its products are for export. The number of its employees and its turnover are growing each year and so is the number of countries to which the company exports most of its products. The company's current annual turnover is approximately EUR 22 million.

The family firm of JDK has been in the market for more than 20 years. Originally its intention was to manufacture competitive condensing units based on modern compressors, using environmentally friendly coolants. However, already in 1991 the range of its products was extended to include electrical distributors for the control of cooling technologies. The company has its own construction, application, manufacturing and service backing and is a recognised partner in the supply of cooling technologies for supermarket and food chains, not only in the Czech and Slovak Republics, but also in other European states. JDK is a much

sought-after partner for the design and supply of special cooling technologies used in industry, testing laboratories, science and research, etc. For example, last year it turned out equipment for a freezing plant with a capacity of 44 415 cu. m. Its two closed compressor cooling circuits ensure the safety of stored products in the case of one cooling set failing. The firm has to its credit nearly 20 cooling technology projects for mini breweries, including the installation of systems using iced water and non-freezing mixtures for cooling brewing processes in breweries.

TC MACH, s.r.o. is an important Czech firm concerned with the development, production, and installation of heat pumps for heating purposes, water warming, and the use of heat pumps in special applications. The company has focused its efforts on the development of air/water MACH heat pumps, which boast top technical standards on a global scale. Since its establishment, TC MACH, s.r.o. has built a stable position for itself and now ranks among leading manufacturers of these systems. For example, in 2007 it signed a contract with the Irish company, Energy Master, for the distribution of its products on the Irish market.

PZP HEATING a.s. is another successful manufacturing company, which has been in the Czech and the foreign markets for more than 20 years. It concerns itself with the development and manufacture of heat pumps for heating and hot water preparation, ventilating and dehumidifying units. In the area of customised production, it is known for its good quality cooling equipment. In the manufacture of heat pumps, the company has gained a dominant position on the domestic market and has become a sought-after manufacturer of equipment with excellent technical parameters. Proof of its achievements is a number of prestigious awards won at international exhibitions and competitions. PZP HEATING a.s. is an affiliation of the well-known German manufacturer, Kermi GmbH, belonging to the Swiss concern of AFG Arbonia-Forster-Holding AG. Within the AFG concern, PZP HEATING holds the position of a specialised centre for the research, development and production of heat pumps of all kinds.

■ ECOLOGY OSCAR

As mentioned before, the manufacturers operating in this sector place great empha-

ZVVZ GROUP, a.s.



ZVVZ GROUP
Supplier of environmental equipment

Turnover (2013): CZK 1 958 million

Number of employees: 880

www.zvvz.cz

Which trends influence your business the most?

Disregarding the unstable economic environment causing economic problems to a number of states and also affecting international relations, the key factor influencing the development of the ZVVZ GROUP engineering holding is its people, their knowledge, skills, education, and working efforts. It is their technical, production, and business skills and motivation on which the economic and commercial growth of ZVVZ GROUP is built.

How successful are you abroad?

Last year, exports accounted for 32% of our revenues, mainly due to orders from Russia, Kazakhstan, and Ukraine, where the ZVVZ

– Enven Engineering company has its affiliations. Our holding also operates in Poland, Slovakia, and the Balkans and has customers in South America, Germany, and Scandinavia. Export trade is a key to prosperity, and that is why ZVVZ GROUP also exports whole plants to customers abroad. We are seeing this as a sign of TOP quality.

Which achievements are you most proud of?

We are very proud that we have managed to overcome the difficulties of past years, and that we have built a well functioning holding with strong and independent firms. We are proud of the excellent technical know-how underlying our production of axial ventilators, in particular big ventilators for aerodynamic testing tunnels, and a number of other things. For example, the manufacture of equipment for the nuclear industry, and the mastering of the desulphurisation technology, which has been added to our production of dust exhausting and solid emission separation equipment.

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Unique Projects of Worldwide Importance Arising in the CR

In June 2014, Nupharo started construction of the first stage of a technological and innovative campus in the Ústí nad Labem Region. In the same month, construction started in Plzeň of another project, the RICE Regional Innovation Centre for Electrical Engineering.

Nupharo is an ambitious project of international significance oriented towards new technologies in the area of electrical engineering. The principal idea of the project is to develop new technologies and, in particular, to support their application in everyday life. The project links together academic, scientific, and business aspects, especially regarding the use of direct current technology. In its first phase, the multifunctional compound will provide an area of 16 000 sq. m for commercial use. In it, would-be users will find room for the development, testing, manufacture, and storage of their products. Nupharo is a private project worth more than three-quarters of a billion Czech crowns, 300 million of which is a grant the investor received from the European Union; the rest of the investment was provided by strategic investors.

The actual structure combines the passive house technologies based on modern environmental standards with active house technologies. It is conceived as a self-supporting and sustainable structure, with an island water treatment system, heat pumps and dual distribution of alternating and direct current. "Reducing energy consumption and more efficient use of energy are among our priorities. I am confident that Nupharo will be one of the pioneers in the application of the latest discoveries in the area of efficient energy use," says Vladimír Smrž, Deputy Minister of the Environment. The campus is expected to open to the public in 2015.

■ UNIQUE HALL LABORATORY

A unique research centre of world parameters, RICE – the Regional Innovation Centre for Electrical Engineering – is arising from



the ground within the compounds of the University of West Bohemia in Plzeň. The Centre has existed at the University of West Bohemia since 2010, but thus far has been without its own building. A part of the new structure will be special laboratories, including a unique hall laboratory. There will also be a testing room for high-voltage power electronics and transport equipment, in which it will be possible to test new equipment of up to 31 kV/4 MW.

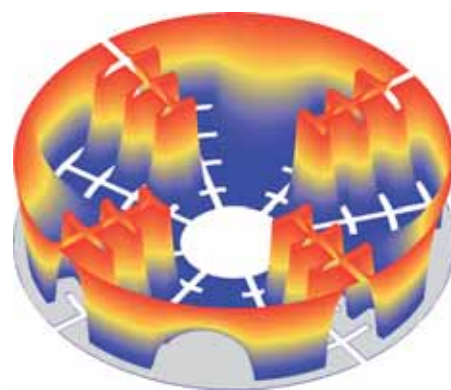
The RICE research team currently (June 2014) comprises some 160 research workers, who concern themselves with new concepts of drives, especially for transport equipment and demanding industrial applications, as well as with the research of materials with special regard to organic electronics and intelligent sensors with a focus on the development of new diagnostic methods. "For example, we are working on new technologies for power stations and new sensors for medical purposes and for the army, which in practice help save human lives. The results of our research can be encountered in everyday life, such as in tramcars, buses and hybrid buses. We have great ambitions and many ideas. To put them into practice in real life, however, we need a team of top researchers, strong industrial partners and good projects," says Zdeněk Peroutka, Scientific Director of RICE. He adds that RICE already has basic financing guaranteed until the year 2019. The total amount of the grant for the RICE project is

CZK 625 million – approximately EUR 24 million – (85% from EU funds and 15% from the State Budget of the Czech Republic), some CZK 370 (approx. EUR 14.2 million) of which are construction costs. The new building of the research centre will be completed in March 2015.

■ SELECTED PROJECTS / RICE

01. Clever Protective Firefighter Clothing

Scientists at the Faculty of Electrical Engineering, University of West Bohemia, in cooperation with industrial partners, have attached special sensors to protective firefighter clothing. The sensors are designed so as to warn firemen against imminent danger. They measure the values of the ambient environment and monitor the vital functions of the person wearing the clothing. Modules sized 4 cm can monitor not only ambient temperature and the fireman's position, but also the concentration of dangerous gases. The values recorded by the modules are signalled to the fireman and the crew commander, in whose hands all the information is concentrated. The sensors thus help to safeguard the men's health and even to save lives.



02. Agros2D (<http://www.agros2d.org/>)

Agros2D is a universal application for physical fields. The programme is designed to solve technical complications described by partial differential equations. Agros2D, which is being developed in cooperation with Nevada University in Reno, is based on the Hermes Library and has a number of specific properties. It is used in research at a number of international universities (Warsaw, Munich, Erlangen, Reno), and by firms for the development of commercial devices. There is a possibility of developing new modules and properties for special applications to the customer's specific requirements.

03. Hybrid Bus

The University of West Bohemia in Plzeň participated in the development of a hybrid bus manufactured by Škoda Electric in Plzeň. Its

research team, under the guidance of Professor Zdeněk Peroutka, included researchers from the Regional Innovation Centre for Electrical Engineering of the Faculty of Elec-



trical Engineering and a group of researchers from Jan Perner Transport Faculty at Pardubice University. The ŠKODA H12 bus was designed as a series hybrid using a Diesel engine as the primary power source.

04. REMCS (RICE Embedded Modular Control System)

Designed for the control of real-time applications in power engineering and transport with special regard to safety. Winner of GOLDEN AMPER 2013 (International Trade Fair of Electrotechnics).



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Czech Engineering Keeps Growing

A total of 347 engineering investment projects were started or completed in the Czech Republic between 1993 and 2013, according to a report by CzechInvest, the Investment and Business Development Agency. Over the past 20 years, CzechInvest has helped to conclude contracts worth more than CZK 71 461 million (approximately EUR 17.8 million), as a result of which more than 24 000 jobs were created. The Czech Republic is attractive to investors not only for its long engineering tradition, but also its well educated labour force and the country's strategic position in the centre of Europe.

In the past few years, engineering in the Czech Republic has been gathering force. While in 2011 only 23 investment projects were realised in this sector, in 2013 their number grew to 62, along with the vol-

ume and number of new jobs as well. Engineering as a whole employs 115 000 trained professionals. The number of firms operating in this sector is approximately 6700. These include renowned companies, such as Robert Bosch, Honeywell, Siemens, and Doosan Škoda Power. The most active are German, Japanese, and American investors. Up to 90% of products manufactured in the Czech Republic go for export, mainly to the European Union. The most attractive regions for investors are South Moravia, South Bohemia, and Ústí nad Labem Regions.

■ PARTICIPATION IN INTERNATIONAL COOPERATION STRUCTURES

In addition, the Czech Republic is the only state in Central and Eastern Europe (CEE) to be a member of the prestigious European Committee for Cooperation in the Machine Tool Industry (CECIMO). In 2013, the Czech Republic was placed seventh, in terms of volume, among the members of this organisation, which comprises Europe's strongest economies and Turkey. The importance of the Czech Republic with regard to the engineering sector is underlined by the fact that the session of CECIMO member states in

June this year was held in Prague, attended by 60 presidents of Europe's most important engineering firms.

■ LARGE NUMBER OF GRADUATES EACH YEAR

Each year, Czech technical universities are pouring out thousands of graduates. In 2013, approximately 3 600 students entered the labour market, while more than 17 000 students were studying at Czech technical universities. At the same time, nearly 9 500 students completed secondary technical school studies. Technical education has a long tradition in this country, going back to the early 18th century, when the Czech Technical University (ČVUT) was founded in Prague. This year, its Engineering Faculty marked the 150th anniversary of its existence. ČVUT is doing well in QS World University Rankings, where ČVUT is placed 101st to 150th among 3000 universities from all over the world. ČVUT is valued in particular for its good basic, applied, and innovative research. Apart from Prague, there are universities in other cities, for example, Brno, Plzeň, Ostrava, and Liberec, which turn out new engineers each year. Czech engineering has a long history, boasting many inventors and inventions, such as the invention of the propeller screw and the jet weaving principle.

■ WHY INVEST IN THE CZECH REPUBLIC

Besides its engineering tradition and a good background in the form of universities, the Czech Republic offers lower production costs than, for example, Western Europe. In 2011, the average hourly wage in engineering in the Czech Republic was 13 dollars. In neighbouring Germany, it was 47 dollars. Another thing the Czech Republic can offer investors is its excellent infrastructure and, due to its central position, also easier exporting to markets in Western and Eastern Europe. Engineering is divided into three basic sectors in the Czech Republic: power engineering, manufacture of railway vehicles, and machine tools and forming machines. Linked to these three engineering sectors is a vast network of subcontractors, whose services new investors can also use.

USEFUL CONTACTS:

Faculty of Mechanical Engineering, ČVUT in Prague www.fs.cvut.cz/web/
 Faculty of Mechanical Engineering, Technical University in Liberec www.fs.tul.cz/
 Faculty of Mechanical Engineering, Technical University in Brno www.fme.vutbr.cz/
 Faculty of Mechanical Engineering, University of West Bohemia in Plzeň <http://fst.zcu.cz/>
 Faculty of Mechanical Engineering, Technical University of Mining in Ostrava www.fs.vsb.cz/cs/
 Faculty of Manufacturing Technologies and Management, Jan Evangelista Purkyně University in Ústí nad Labem <http://cz.fvtm.ujep.cz>

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Mechanical Engineering Keeps on Supporting the Czech Industry

Mechanical engineering has an undoubted and age-long tradition in the Czech Republic. It has been decorated by many achievements, but also by the ability to get over episodic periods of crisis that require new technical and business ideas, and usually also through restructuring.

Czech mechanical engineering underwent a period requiring inventive approaches and innovative ideas in the recent past – a period which, in a certain sense, is still continuing. Once again we are seeing successful companies, both large engineering firms and small and medium-sized enterprises, as well as companies which are still seeking their place in modern global engineering. This is not a specific feature of the Czech Republic; other countries, too, are undergoing a similar process, as it is increasingly difficult to maintain positions in certain top engineering segments. It is our aim to maintain our sound heavy industry base and, at the same time, to become leaders in some new technologies. In addition, in view of the historical and geographical contexts, Czech industry must always be sufficiently strong in exports, without which it could not develop on a long-term basis. No one in Europe or the rest of the world is waiting for us, so we must do our best, focus on innovations and build on good quality, which was an attribute of Czech products in our more famous past, and in many cases also in our present history. Confirmation of this was the eighth annual ENGINEERING OSTRAVA Conference, organised by the Czech Machinery Cluster (CMC). The theme of the Conference this year was “Growth Factors of Czech Engineering”.

■ OPPORTUNITIES AND PITFALLS IN THE CZECH MACHINERY

A frequently repeated phrase at the Conference was that innovations and trade were the driving forces of economic growth. CMC pays systematic attention to innovations, as there is never a sufficient quantity of them in this area. Czech engineering trade statistics clearly show that, besides domestic

sales, Czech engineering products have found their way to countries referred to as engineering giants, such as Germany, through which Czech products are becoming part of the largest technological wholes. At a seminar of experts organised by CMC in Hessen earlier this year, we could see modern “engineering with no metal chips on the floor”, where the work at the end supplier’s premises has practically shrunk to the assembly of own and imported components to make up the large whole, which has to meet the very exacting parameters set out by the customer. Besides Germany, the areas of interest of CMC member firms include Turkey, Russia, India, South America, and the Arab Peninsula.

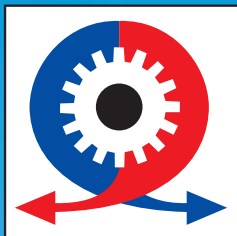
We systematically give our attention to all countries whose economies are showing growth trends and which are interested in engineering production.

These are the opportunities. And the pitfalls? To succeed in foreign countries, Czech firms would need an environment at home where no obstacles are placed in their way, obstacles that are obviously an unfair burden. These include in particular the fees for renewable energy sources, which in the Czech Republic are much more disadvantageous to industry than in other countries – and more than that. Many reputable local busi-

nessmen refer to our country as a ‘republic of fees’, which is blind to the fact that unfair fees are choking those who pay significant sums in taxes on their industrial activities. This is something that is sucking financial resources out of industry and is causing firms huge problems. Fees applied to renewable energy sources have an absolutely devastating effect on industry and are draining out a huge part of potential profit, which could be used for raising our competitiveness.

Our outlets are gradually being moved from Europe, which is finding itself in recession, to territories that are growing. This is a natural development. Czech companies must go where new energy sources are developing, including nuclear sources, where an industrial base is being built and where both engineering projects and mass produced engineering goods can be supplied. Here is one example. VÍTKOVICE MACHINERY GROUP has an EPC contract for the construction of a coal-fired power station in Turkey, where pressure tests of the first of two 145 MW fluid boilers were successfully carried out at the Adularya Power Station at the end of April and beginning of May. In Pakistan, the Group is currently reconstructing a rolling mill and is also preparing to go to Brazil, where it will participate in one of the world’s five largest petrochemical projects.

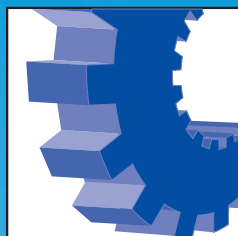




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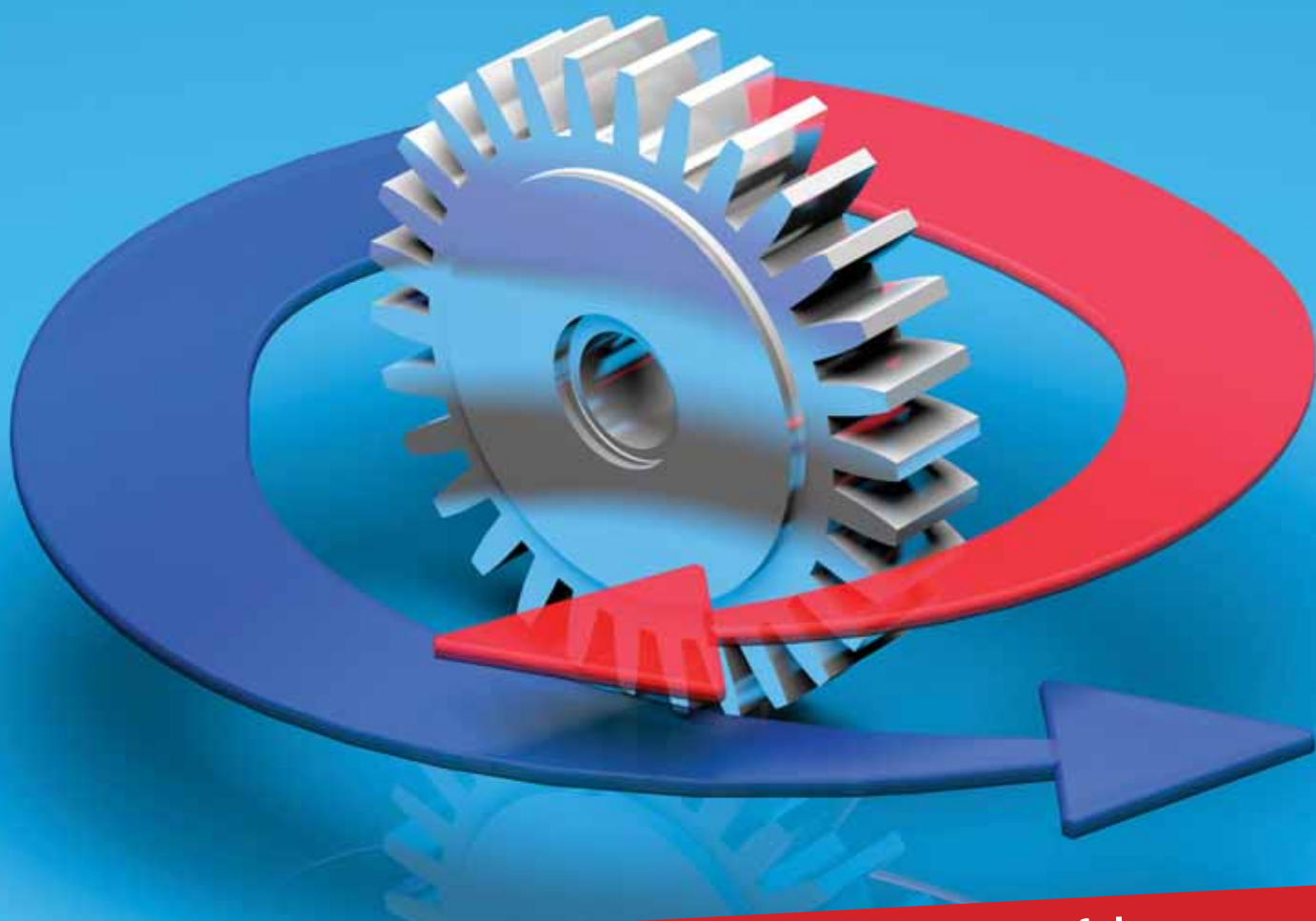
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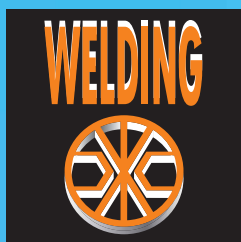


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In another part of the world, the United Arab Emirates, it is participating in the most important environmental projects.

A real breakthrough investment in engineering metallurgy is the modern line for a high-speed forging machine, practically the only one in Europe. It is undeniably the largest investment in engineering technology in the Czech Republic for the past 20 years. Vítkovice Hammering can boast its first successful delivery of pipes made on the high-speed forging machine, which will be used in Spain for the manufacture of papermaking rollers.

In the first half of 2014, another CMC member, Cidegas, delivered 40 compressed natural gas containers to Grana y Montero in Peru. The contract was worth more than four million dollars. Each container comprises sixty-eight 180-litre steel cylinders; the working pressure in the cylinders is 250 bars. The steel cylinders were manufactured by Vítkovice Cylinders. In the United Arab Emirates, the Vítkovice trademark is still very much in focus. Local taxi cabs with CNG cylinders are well-known there, as well as Vítkovice CNG trailers, and not least of all, sophisticated CNG stations.

Strongly expanding CMC members include the Armatury Group, based in North Moravia, which supplies its products to Congo, Morocco, Egypt, Algeria, and other countries. V-NASS supplies components for drilling equipment used for oil extraction from under the sea bed, for example, in Brazil, the UK, and Malaysia. FERRIT s.r.o., in turn, supplies equipment for coal mines and power stations in Turkey, China, Latin America, and Vietnam. Another company, Jihomoravská armaturka spol. s r.o., manufactured the spindle and knife gate valves for Prague's flood prevention project, and slide valves, hydrants, and safety valves for the Dukovany Nuclear Power Station. As can be seen, work is being done, but it is by no means simple and easy.

■ DELIVERIES TO NUCLEAR POWER PLANTS GO ON

CMC members have been supplying their products to nuclear power stations for about 40 years. They have made and installed components for the primary circuits, heat exchangers, and other elements for the secondary circuits of VVER-type nuclear power stations and the construction of new blocks.



There is perhaps no other group in Europe supplying its products to both Russian and French and even Indian nuclear projects. Members of the Group also supplied primary collector forgings for VVER-type steam generators – 1200 to Rosatom, and steam generator shell rings to the Indian firm of Larsen & Toubro. Several CMC members are currently participating in the construction of the 3rd and 4th blocks of the Mochovce Nuclear Power Station in Slovakia.

We are interested in nuclear programmes in the UK, where we attended an important UKTI conference in London and became acquainted with extensive British plans for the enlargement and reconstruction of their nuclear facilities, and visited the famous Forge-masters firm in Sheffield.

In October, we are attending a thematic seminar in Budapest, Paks and Pécs in Hungary, where we will become acquainted with that country's nuclear programme.

Vítkovice Power Engineering, together with Westinghouse Electric Company, com-

pleted the manufacture of a trial module of a steel structure for AP 1000 nuclear power plants. Mostárna Vítkovice a.s. is the first and so far the only manufacturer in Europe to master the construction of such a module. As a result, we can use the module in all AP 1000 projects in Europe, North Africa, and the Middle East.

■ POWER ENGINEERING AND THE MECHANICAL ENGINEERING OSTRAVA CONFERENCE

The main subject of interest for CMC is power engineering, and naturally also nuclear power engineering. This subject is the focus of attention at the traditional ENGINEERING OSTRAVA conferences and during regular missions to countries devoting themselves to development in this area, such as the UK, Russia, India, and other states.

Our group is proud of having initiated the tradition of the ENGINEERING OSTRAVA annual engineering conference, this year being held for the eighth time. There, leading experts discuss topical and strategic priorities of Czech industry. For example, this year they drew the attention of the authorities to the fact that transport corridors in the Czech Republic were absent, which is an obstacle to export trade. They presented the Czech Republic as a country of top engineering technologies, a country of nuclear technologies and technologies for the gas industry, including shale gas extraction.

The subject of the eighth ENGINEERING OSTRAVA 2014 Conference was "Growth Factors of Czech Engineering". Altogether 16 experts read papers at the Conference,



including specialists from the Ministry of Industry and Trade, the Czech National Bank, the International Chamber of Commerce, the Mining University, general managers of engineering enterprises, commerce officials of the embassies of Germany, Austria and Turkey, and CMC President, Mr. Světlík.

At the Conference, engineers called for the improvement of conditions for doing business to a similar level as that, for example, in Germany, particularly as regards energy prices and the state energy strategy. In this connection, they mentioned the cancellation of the tender for the enlargement of the Temelín nuclear power station. The Ministry of Industry and Trade of the CR informed engineering enterprises that the situation was being dealt with and preparations were being made for further progress.

CMC has been supporting the meaningful growth of its membership base on a long-term basis, not as an end in itself, but as a means of promoting the quality of cooperation among its members.



■ USING EUROPEAN FUNDS FOR PROJECTS

CMC extensively participates in different educational projects, usually involving its academic members, especially those from the Mining University in Ostrava, a partner of the events.

At a cost of CZK 49 million (approx. EUR 1.7 million), the Cluster has trained some 3 000

employees for current deliveries, particularly in the area of nuclear power engineering. As a result, CMC and its members have gained exceptional professional strength as regards the individual knowledge of specialists and production know-how.

■ PRIORITIES OF THE CZECH MACHINERY CLUSTER

CMC's main activities include the creation of supplier chains, the negotiation of conditions for purchase alliances, joint participation in the Brno International Engineering Fair, regular workshops in the premises of member firms and technical seminars abroad. More information about CMC's current activities can be found at www.nskova.cz.

Ladislav Mravec

General Manager

Czech Machinery Cluster

E-mail: mravec@nskova.cz

www.nskova.cz





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The Czech Republic Holds Its Position among Leading Machine Tool and Forming Machine Manufacturers



Statistical figures for last year's machine tool and forming machine export can be considered moderately optimistic. Taken together, the export of those commodities in 2013 rose by 0.52% (in Czech crowns) in comparison with 2012. While machine tool export declined by 2.93%, the export of forming machines rose by 48.77%.

Import in 2013 shown in Czech crowns rose by 4.8% in comparison with 2012. Machine tool import grew by 11.09%, while the import of forming machines declined by 9.53%. The most important items in the machine tool category, whose export showed an increase in comparison with 2012, were machining centres – metalworking unit-built machine tools, where export rose by 4.32%. In import, too, this item showed a considerable growth, amounting to 32.89%.

The export/import balance in the machine tool and forming machine sector

in 2013 showed an export surplus in nearly all important items. The dominant items in the machine tool and forming machine sector, in both export and import, were machine tools. Despite a slight decline in their export in 2013, that year is valued positively. The Czech Republic reaffirmed the 2012 export growth and maintains its position among leading machine tool and forming machine manufacturers. EUR statistics are influenced by the intervention of the Czech National Bank last November, resulting in the weakening of the crown, whereby Czech export prices decreased and import prices increased. The result was a worsening of the export/import balance for 2013 by thousands of euros in comparison with 2012. In euros, machine tool and forming machine export dropped by 2.7%, and the export of forming machines was down by 6.04%.

■ GERMANY THE LARGEST TRADE PARTNER

The Czech Republic's largest partner in 2013 as regards the export of its machine tools and forming machines was Germany, followed by Russia, Slovakia, China, and Poland. Germany thus remains a partner absorbing

Export and import of machine tools and forming machines in the CR in 2013 (in EUR thousand)

| | Export | Import |
|-------|-------------|-------------|
| 8456 | 25 521 | 49 478 |
| 8457 | 111 564 | 84 179 |
| 8458 | 79 443 | 67 329 |
| 8459 | 85 312 | 31 179 |
| 8460 | 184 588 | 26 237 |
| 8461 | 24 138 | 11 077 |
| 8462 | 47 330 | 83 683 |
| 8463 | 8 658 | 12 667 |
| Total | EUR 566 554 | EUR 365 829 |

| | |
|------|---|
| 8456 | Machine tools, laser or ultrasound ablation. |
| 8457 | Machining centres, unit-built metalworking machine tools |
| 8458 | Lathes |
| 8459 | Drilling, boring, milling, treading machines |
| 8460 | Machine tools for grinding, lapping, polishing of metals, carbides, etc. |
| 8461 | Machine tools for planing, etc., saws, metal ablation machines |
| 8462 | Forming machines, forges, etc. |
| 8463 | Other machine tools for working metal or cermets, without removing material |

Export and import of machine tools and forming machines in the CR in 2013 (in EUR thousand)

| | Export | Import |
|------------------|---------|---------|
| Machine tools | 510 566 | 269 479 |
| Forming machines | 55 988 | 96 350 |
| Total | 566 554 | 365 829 |

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some 30% of the Czech Republic's total export of this commodity. Germany also plays an important role in Czech imports. In 2013, import from Germany accounted for 40.14% of the total volume of Czech machine tool and forming machine import.

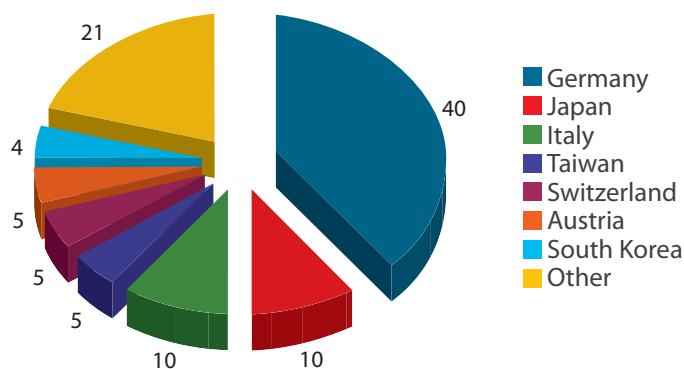
■ REPRESENTATIVES OF EUROPEAN ENGINEERING ASSOCIATIONS MEET IN PRAGUE

From June 21 to 24, after ten years, the Czech Republic once again played host to the General Assembly of the European Association of the Machine Tool Industries, CECIMO. The Association, with its membership base of 15 countries, covers more than 97% of Europe's total output of machine tools and more than one-third of the world output of this commodity. Last year's volume of the CECIMO countries' output of machine tools and forming machines rose to EUR 22.8 billion, a 2% increase year-on-year, according to the Association's Economic Committee, which also expects the same growth in 2014. The European machine tool sector is fully competitive, with firms exporting up to 80% of their output.

During the Prague session, Mr Jarmo Hyvönen of Finland, Managing Director of Oy Machine Tool Co., pointed out the fact that the recent global economic crisis hit the financial sector immensely, which has resulted in a limited access of machine tool manufacturers and their clients to financial sources. One of the final documents of the CECIMO General Assembly is an appeal for coordinated action of all the influential players in the market, politicians, managers operating in the area of production and representatives of financial institutions, so as to ensure Europe's competitiveness in machine tool and forming machine produc-



EXPORT OF MACHINE TOOLS AND FORMING MACHINES FROM THE CR BY COUNTRY IN 2013 (in %)



tion. Export continues to be an important source of growth for the machine tool and forming machine sector. CECIMO therefore appeals to the European Commission to carry on with its efforts to push through the principles of free trade and the observation of transparent rules preventing the creation of customs and tariff barriers.

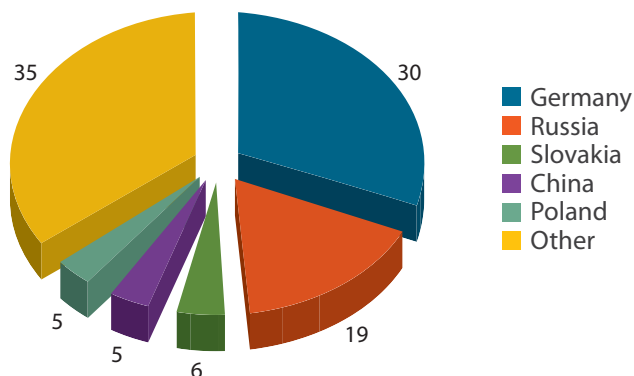
■ ENGINEERING FORUM

The first Engineering Forum met in Prague in mid-June to discuss topical problems of Czech engineering. Besides support to exports, participants discussed science, research, innovation, and education. Several successful projects were presented at the Forum, for example, the Research Centre for Engineering Production Technology attached to the Faculty of Mechanical Engineering, Czech Technical University in

Prague, highlighted its active involvement in the programme of the Competence Centre of the Technological Agency of the Czech Republic, and examples were given of co-operation between engineering firms and technical schools. For example, KOVOSVIT MAS collaborates with technical schools in Sezimovo Ústí and TOS Varnsdorf with the Technical School and Secondary School in Varnsdorf. In the discussion, the participants appreciated the fact that the Union of Engineering Technologies is helping to reform technical education in the Czech Republic and participates actively in making technical branches more attractive in the eyes of would-be students and their parents. One of the events of this type, to be held for the sixth time this year, is a competition for students in CNC machine tool programming. The competition is part of the traditional accompanying programme of the International Engineering Fair in Brno. The IEF and the IMT (International Machine Tool Exhibition) are not only a platform for the presentation of new machines and advanced technologies, a place where manufacturers and their suppliers meet, and a meeting place of their potential customers, but also an efficient and very attractive instrument for the promotion of technical education.

The article was prepared on the basis of background materials supplied by the Association of Engineering Technology (more at www.sst.cz).

IMPORT OF MACHINE TOOLS AND FORMING MACHINES FROM THE CR BY COUNTRY IN 2013 (in %)



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Czech Manufacturers of Agricultural Machinery Are Doing Well in Placing New Machines on the Market

Agricultural machines used to be important Czech export items. Later, Czech manufacturers were pushed out of the market by international competition. In spite of this, sophisticated production has not disappeared from Czech factories, and today it is returning with new impetus. Firms are responding to demand more readily, coming up with new models and better processing quality and, by competitive prices, standing their ground even in international trade.



In the Czech Republic, there are approximately 100 agricultural and forestry machinery manufacturers. The A.ZeT Agricultural and Forestry Machinery Association has 45 firms, whose membership includes all the major domestic manufacturers. The total output of the member firms is worth about CZK 18 billion (approx. EUR 700 million), which accounts for 75% of the total production in the Czech Republic. A.ZeT members account for more than 80% of the total Czech agricultural machinery exports of CZK 12 billion (approx. EUR 462 million). Agricultural machinery manufacturers employ some 10 000 people in the Czech Republic, about one-third of the number of workers the sector employed 20 years ago.

According to a survey of the Agricultural Machinery Importer Association and the Agricultural and Forestry Machinery Association, 2304 tractors were sold in 2013 in comparison with 2096 tractors two years ago, a growth of 9.9%; in the same period, 175 combine harvesters were sold in comparison with 196 two years ago, a 10.7% decline year-on-year. The fact, however, is that in 2009 and 2010 overall sales dropped significantly, so that the 2013 figures are roughly at the 2006 level.

Final machinery manufacturers coped better with the sales crisis of past years, as

they are not as dependent on cooperation production. On the contrary, they were able to keep their employees by drawing external cooperation into their own plants. The same applies to the manufacturers of smaller machines, where it is easier to obtain finance for purchases than in the case of big and expensive machines.

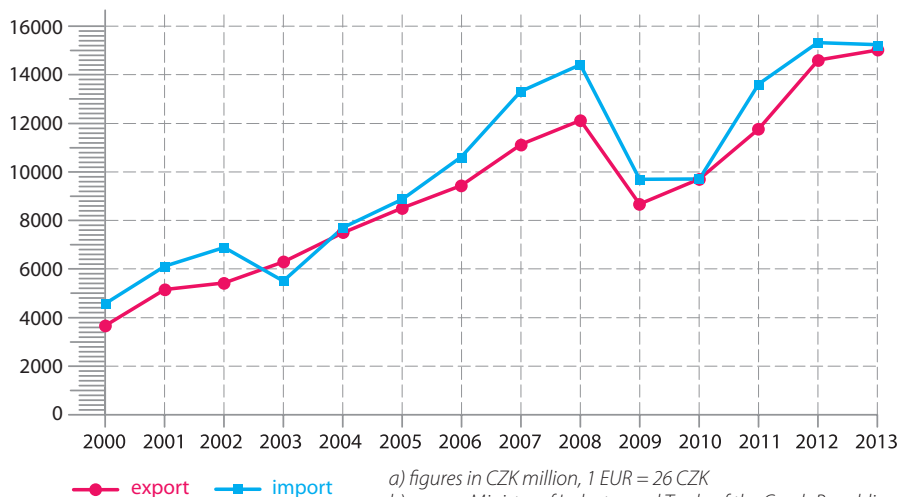
Worse off are manufacturers who previously used some of their facilities for production based on cooperation, as, at the time when demand was declining, final manufac-

turers brought that production back home and used their own production facilities.

FOREIGN TRADE

Czech firms are becoming increasingly involved in international trade; practically until 2008 foreign machinery import grew at the same rate as manufacturers managed to place their goods on foreign markets. In 2009 and 2010, foreign trade fell by approximately 30% in comparison with the previous period, the same as domestic sales. The year

FOREIGN TRADE – MANUFACTURE OF FORESTRY AND AGRICULTURAL MACHINES (IN CZK MILLION)



Source: Ministry of Industry and Trade of the Czech Republic

2011 saw a revival of foreign trade, and in the following years this trend continued. According to the latest surveys, A.ZeT export and import remain balanced, amounting to CZK 15 billion (approx. EUR 577 million in 2013).

The main import items are the types of machinery that are not manufactured in the Czech Republic, such as combine harvesters, higher-performance tractors (over 120 kW) and presses. Regrettably, these imports also include forage harvesters, which we used to manufacture in the past, and even to export, but their manufacture has been stopped. The same applies to sugar beet harvesters, where we are fully dependent on import.

The main import items over the past 10 years have been John Deere (23%), New Holland (13%) and Case IH (11%) tractors, and Claas (36%), New Holland (24%), and John Deere (21%) combine harvesters.

Zetor tractors play an important role in exports. The manufacturing firm exports about 86% of its output, and sells the rest in the Czech Republic and Slovakia. Other im-

portant exporters are Farmet at Česká Skalice near Náchod, which manufactures soil cultivation machines; these machines (cultivators, compactors, harrows) are the most frequently exported items. Other big manufacturers and exporters are Bednar FMT Praha, followed by OPaLL Agri Dolní Životice, and SMS CZ Rokycany. AGRIO Křemže is known for its sprayers, ZDT Nové Veselí exports trailers and semi-trailers. Other export items are mowing machines, front loaders, manure spreaders, and the full range of small agricultural machines and tools. Also doing well is the manufacture of special equipment, such as tree stump cutters and oil seed processing refineries. Czech stable mechanisation manufacturers, such as FARMTEC Jistebnice, Bauer Technics Tábor and AGE České Meziříčí, are well known.

The largest trading partners are customers in neighbouring Germany, Austria and Slovakia, followed by customers in France and Poland. Here, much depends on the particular machines. For example, Zetor is successful in

Poland, Scandinavia, and the Balkan countries; some manufacturers have found partners in the states of the former Soviet Union – Russia, Ukraine, the Baltic states, and others in the new EU states – Romania and Bulgaria.

■ TRADE FAIRS AND EXHIBITIONS IN THE CZECH REPUBLIC

Czech manufacturers and large importers collaborate closely with the organisers of the two largest domestic agricultural machinery exhibition organisations, BVV Trade Fairs Brno, a.s. and Výstaviště České Budějovice, a.s. The strictest comparison criteria are met by the TECHAGRO / SILVA REGINA / ANIMAL VETEX / BIOMASS international fair, which has gained high international renown and ranks immediately after the two most prestigious exhibition events in this sector, the fairs of SIMA Paris and AGRITECHNICA Hannover. Its initiator in 1994 was A.ZeT, which has been one of the co-organisers of the fair for the whole duration of this event and which participates in outlining the con-



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cept of the fair and its accompanying programmes. Czech firms traditionally occupy a large exhibition space at the fairs. Over the past few years, TECHAGRO has been the most successful project of all the fairs organised in the Czech Republic; for example, in 2014 it occupied a surface area of 83 707 sq. m; attendance was 119 013 visitors and there were 743 exhibitors.

■ PRESENTATION ABROAD

The production potential of Czech agricultural engineering exceeds the absorption capacity of the domestic market. Supporting Czech exports is one of the main activities of A.ZeT. The Association is trying to present Czech manufacturers abroad – the most important events not only on the European scale, but in the world context, are the trade fairs of SIMA in Paris and AGRITECHNICA in Hannover, which Czech firms have not failed to attend since 1995. The Association also organised joint participation of Czech firms in Kiev (Ukraine), Herning (Denmark), Poznan (Poland), and AGROSALON in Moscow (in 2014 this is our most important participation abroad, because the trade fairs in Paris and Hannover are held in odd years) and twice at EXPO AGRO in Argentina. An important fair for the manufacturers of small agricultural machinery is GaLaBau in Nuremberg, where, in September this year, an official Czech exhibition will be installed for the second time.

The participation of Czech firms in the above-mentioned fairs and references to the good technical parameters, quality and reliability of Czech machinery augur well for Czech manufacturers, who hope for success in the demanding EU single market.

The quality of Czech products is comparable with European standards, which is supported by the fact that a large quantity of machinery and equipment developed in Czech factories and bearing the colours of the manufacturers' foreign partners is cultivating the fields and gathering the harvests across Europe. Not all Czech firms, however, are willing to accept this model, although this is currently a general trend. We may ask why, if such cooperation provides employment for Czech hands, should this model be rejected?

■ STRENGTHS, TRENDS, AND EXPECTATIONS OF THE SECTOR

The sector may pride itself on the very high quality of its top managers: Karel Žďárský, Director and Chairman of the Board of Directors of the Farnet joint stock company, won the 2013 Manager of the Year award, and Lubomír Stoklásek, Managing Director and Chairman of the Board of Directors of Agrostroj Pelhřimov was awarded the same title in 2011. So it is not surprising that these two firms are the largest Czech exporters of agricultural machinery.

A relative advantage of our agro-engineering industry is the structure of our manufacturing firms: most of them are small and medium-sized enterprises, which are more apt to react to demand and prepare their machines to promptly meet the requirements and wishes of customers.

Making a reliable prediction for the period to come is extremely complicated. The crisis meant not only fewer orders and production cuts, but also a crisis of economic predictions. Of course, a revival is possible, but a downfall cannot be excluded either. The

Czech economy is small and open and is practically dependent on export. Of course, we would be glad if the trend of the past years continued, and if the information from the banking sector that the interest of farmers to invest is growing was confirmed, and if the positive trend with regard to machinery purchases continued and was of a more permanent character.

The recently ended TECHAGRO and SILVA REGINA fairs could indicate the trends of how the situation will develop in the next few months, if not in the next few years. Informal debates with farmers and businessmen reveal signs of optimism as far as agriculture is concerned, but of a worsening situation in forestry. There is no meaningful turn for the better in agricultural production behind the success of this year's agrarian trade fairs. The interest shown in agricultural machinery is mainly due to the necessity of modernising machines and technologies, which was at a standstill during the crisis years.

However, agriculture is a sector strongly dependent on political decisions, at both national and EU levels. With regard to domestic decisions, these concern, for example, cheaper fuel for farmers, and imposing taxes on still wines. Regular competition is being distorted by the policy of chain stores, on which farmers have become unduly dependent as a result of current legislation. A controversial issue dividing EU member states is joint agricultural policy financing, which, due to unbalanced and unjust interventions and subsidies, upsets free competition and demotivates hundreds of Czech farmers, even meat, grain, milk, fruit and vegetable producers, who stand up well to competition. In view of the different approaches, the question is to what extent we will be able to carry out the changes that will cut down spending on common agricultural policy, give more support to rural development and the improvement of the quality of country life, while reducing production grants and regulation within the sector, without allowing for asymmetric solutions which put certain states (including the Czech Republic) at a disadvantage.

Dušan Benža

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