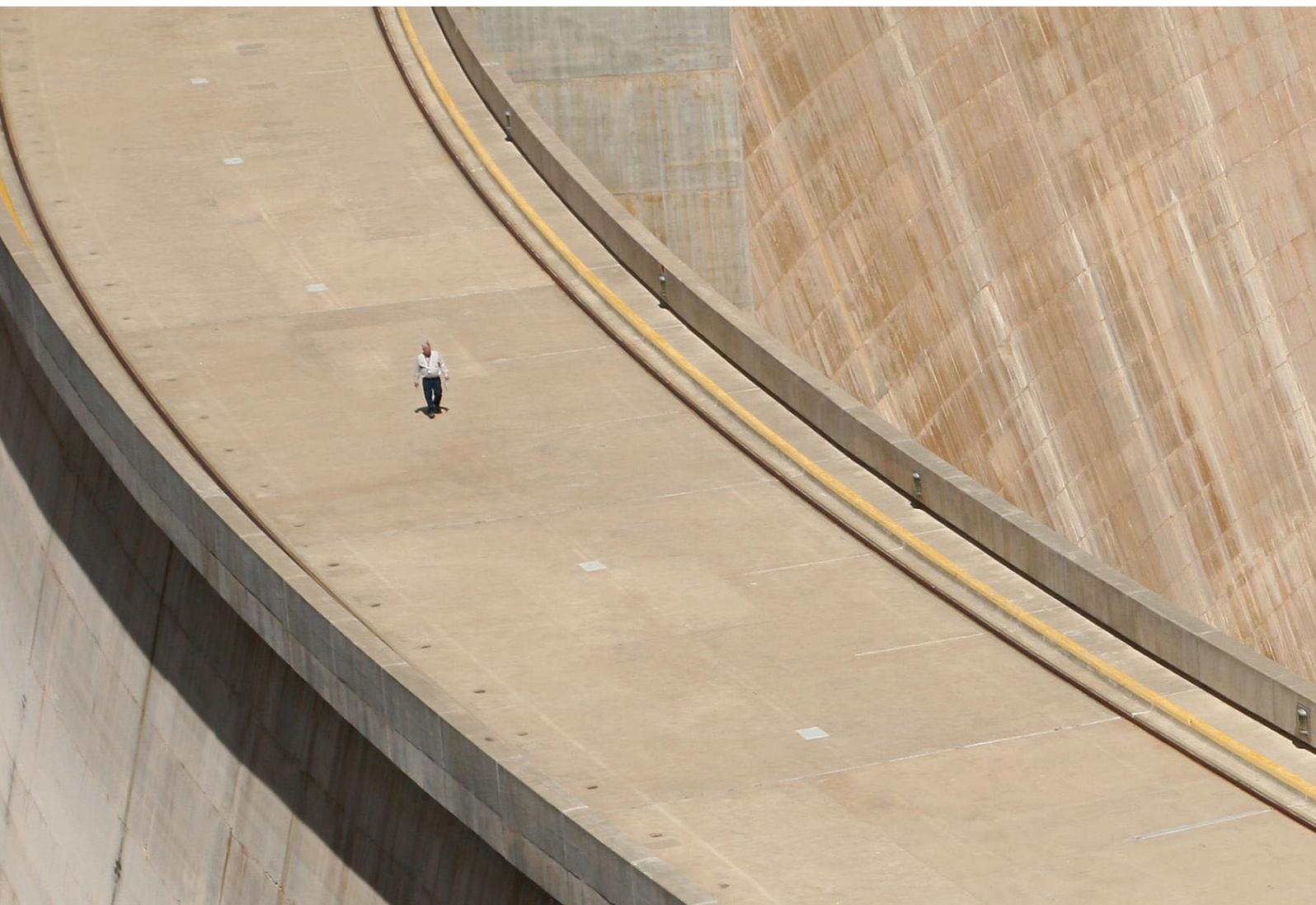


More from less — material resource efficiency in Europe
2015 overview of policies, instruments and targets in 32 countries



Czech Republic



May 2016



This country profile is based on information collected by the Waste Management Department - Ministry of the Environment, Empress o.s., and Ecology Department - Ministry of Industry and Trade. This document should not be seen as an official list of government priorities and is not necessarily an exhaustive list of all national material resource efficiency policies, objectives, targets or activities in place. The information is current as of June 2015.

This country profile was prepared as part of the 2015 EEA review of material resource efficiency policies, that aimed to collect, analyse and disseminate information about the development and implementation of material resource efficiency policies in EEA member and cooperating countries. The work resulted in the following outcomes:



32 short country profiles (this document) – self assessments prepared by countries, describing the current status of material resource efficiency policies including key strategies and action plans, policy objectives, instruments, targets and indicators, and the institutional setup. Countries were also invited to share reflections on the future direction of resource efficiency policies.

EEA report *More From Less – material resource efficiency in Europe* – prepared by the EEA and ETC/WMGE, the report analyses trends, similarities and differences in policy responses, showcases selected policy initiatives from the countries, and offers some considerations for the development of future policies.

The EEA report *More from less – material resource efficiency in Europe* and the 32 country profiles are available at: <http://www.eea.europa.eu/resource-efficiency>

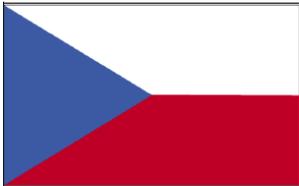
For information about trends and policies on municipal waste management in the participating countries, please visit: <http://www.eea.europa.eu/publications/managing-municipal-solid-waste>

Information about EU Member States' waste prevention programmes can be found at: <http://www.eea.europa.eu/publications/waste-prevention-in-europe-2015>

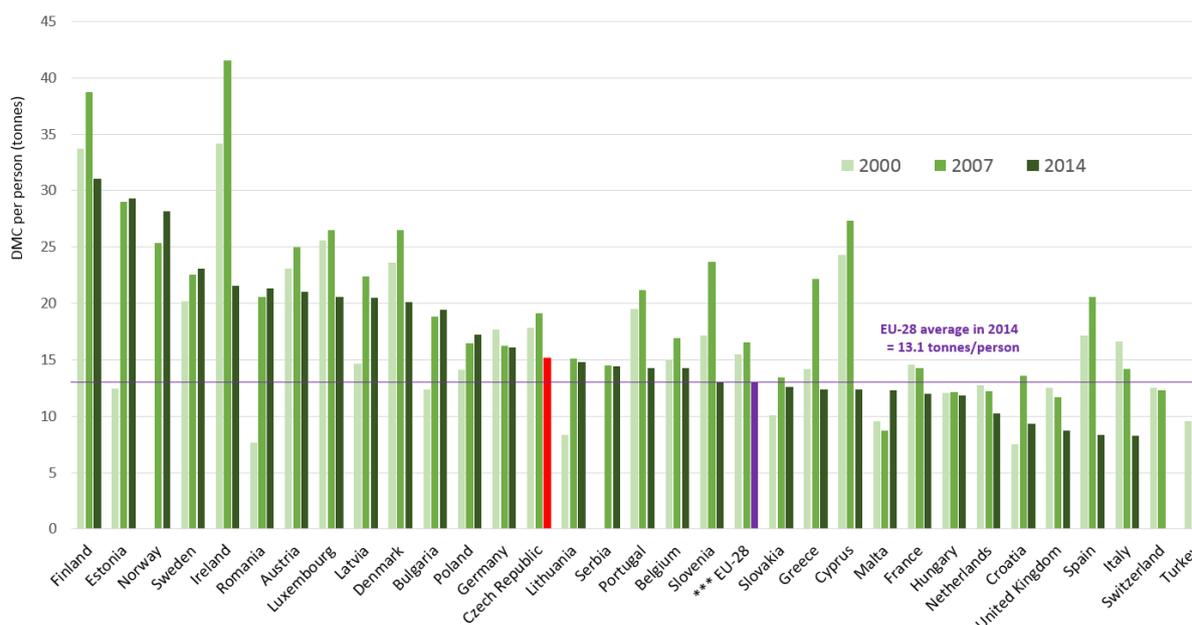
For information on climate- and energy-related policies, including those on energy efficiency, in the participating countries, please visit: <http://www.eea.europa.eu/themes/climate/ghg-country-profiles>

Czech Republic, facts and figures

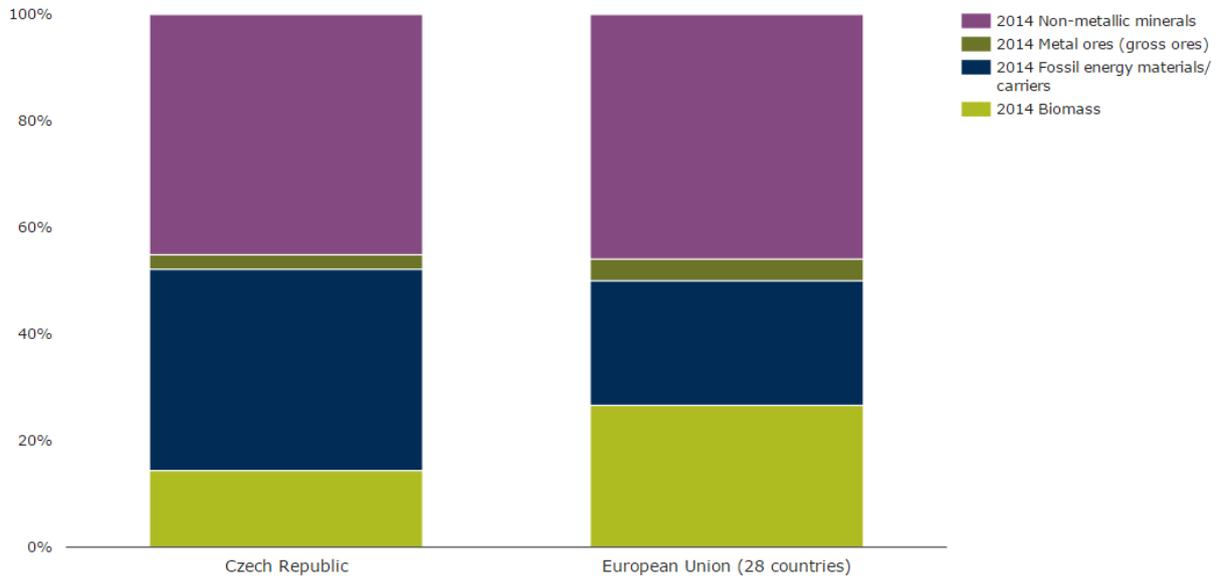
Source: Eurostat

	<p>GDP: EUR 155 billion (1.1 % of EU-28 total in 2014)</p>
	<p>Per person GDP: EUR 23,200 (in purchasing power standard) (85 % of EU-28 average per person in 2014)</p>
	<p>Use of materials: 160 million tonnes DMC (2.4 % of EU-28 total in 2014) 15.2 tonnes DMC/person (116 % of EU-28 average per person in 2014) Resource productivity 1.00 EUR/kg (51 % of EU-28 average in 2014)</p>
	<p>Structure of the economy: agriculture: 2.6 % industry: 37.4 % services: 60.0 % (2014 est.)</p>
	<p>Surface area: 78,900 square kilometres (1.8 % of EU-28 total)</p>
	<p>Population: 10.5 million (2.1 % of EU-28 total)</p>

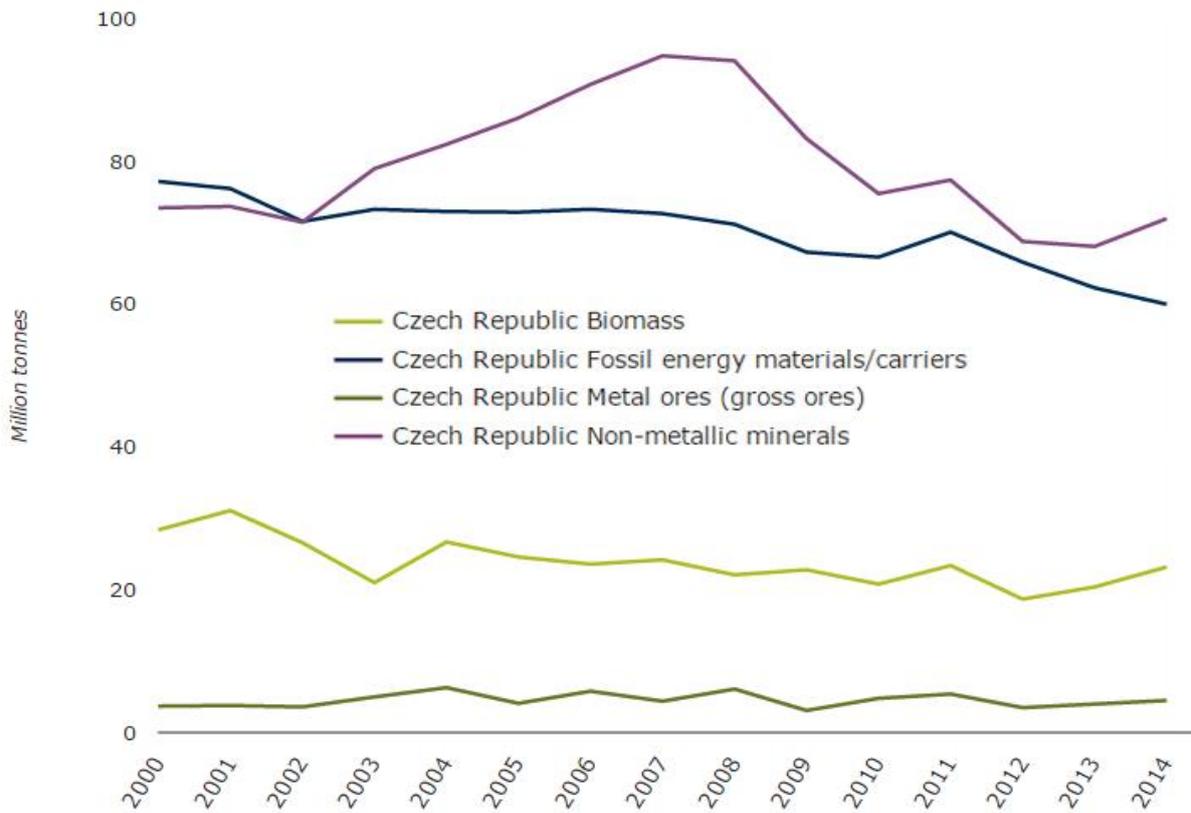
Use of materials (DMC) per person, participating countries and EU-28
(2000, 2007 and 2014)



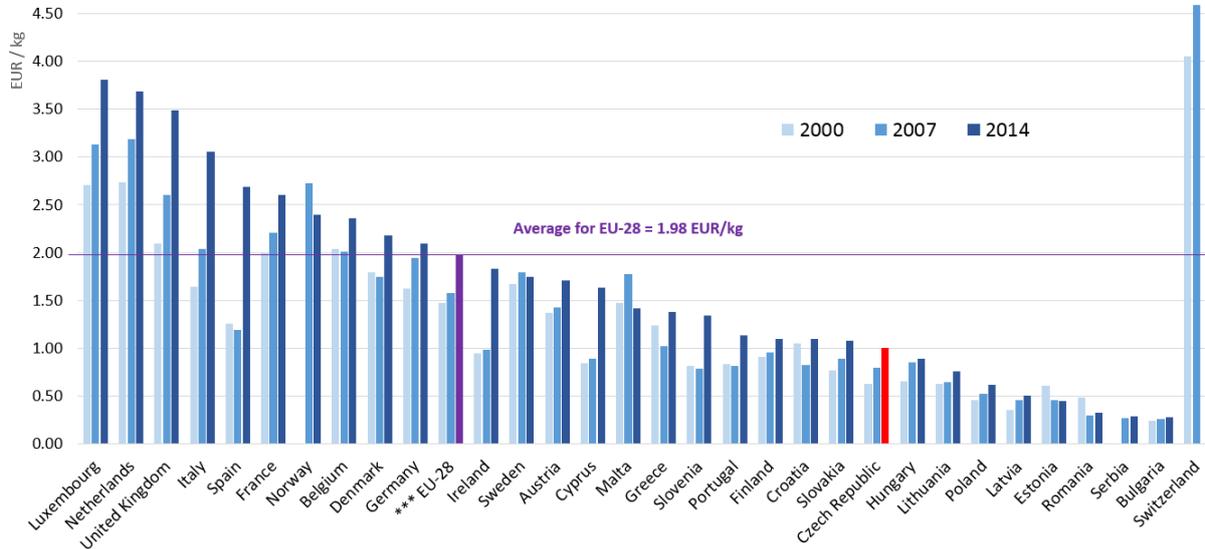
Domestic material consumption by category, EU-28 average and Czech Republic (2014)



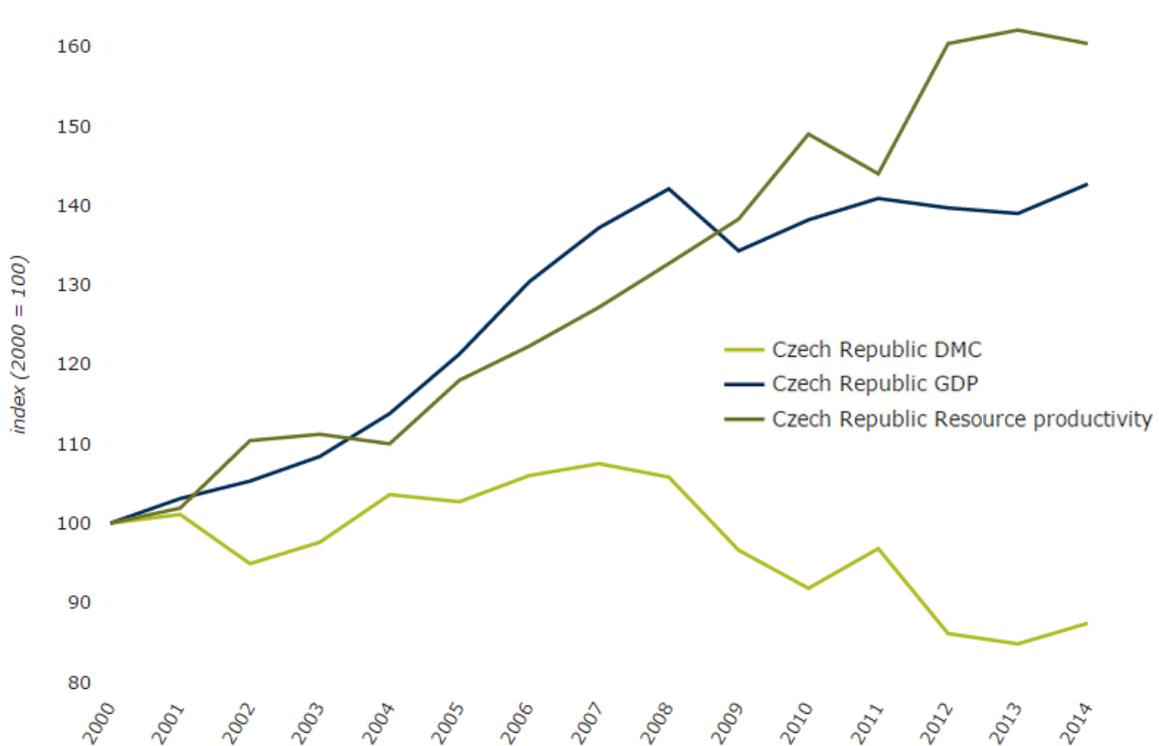
Trends in material consumption, Czech Republic by category (2000–2014)



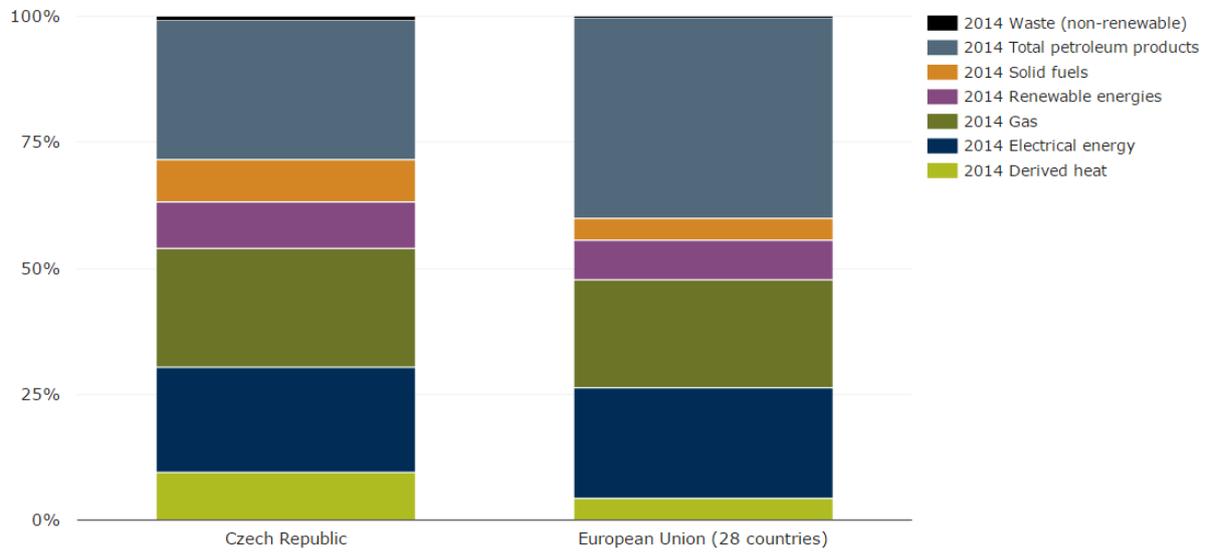
**Resource productivity (GDP/DMC), participating countries and EU-28
 (2000, 2007 and 2014)**



GDP, DMC and resource productivity trends, Czech Republic (2000–2014)



Share of final energy consumption by fuel type, EU-28 and the Czech Republic (2014)



Introduction

The Czech Republic does not currently have a dedicated policy on material resource efficiency. The issue of the effective use of resources is addressed in part through a number of national strategies.

Scope of material resource efficiency

Resource efficiency is highlighted within the National Strategy for Sustainable Development, the Ten Year Programme for Sustainable Consumption and Production, the State Environmental Policy, the Secondary Raw Materials Policy, the Waste Management Plan and the Waste Prevention Programme. Results from the Secondary Raw Materials Policy are elaborated in the Action Plan on Self-Sufficiency in the Czech Republic. It will highlight the substitution of raw materials by secondary raw materials.

In the Secondary Raw Materials Policy, particular priority commodities (materials) are listed, including metals, paper, plastic, glass, construction materials, (end-of-life) vehicles, electrical and electronic equipment (EEE), tyres and rubber, and batteries, but as yet there is no exact definition of secondary raw materials.

Driving forces for material resource efficiency

1. The need to secure raw materials for the Czech economy;
2. To promote the competitiveness of the Czech Republic;
3. Ensuring sources of critical raw materials to secure security of raw materials for the state;
4. Creating new jobs – addressing social issues;
5. Protecting the environment and human health;
6. More recycling of waste as a source of raw materials, as opposed to the loss of primary commodities to landfill;
7. Amendment of European Union (EU) and national legislation to promote greater recycling of secondary raw materials and the conversion of waste at source.

Priority material resources and sectors

Priority materials

Secondary raw materials policy of the Czech Republic

This sets out specific priority commodities (materials), including metals, paper, plastics, glass, construction materials, end-of-life vehicles (ELVs, scrap cars), waste electrical and electronic equipment (WEEE), used tyres and waste rubber, waste batteries and accumulators. The determining criteria were the importance of the commodity for Czech industry (as input for production), the mass production of secondary raw materials, the potential for its use in the Czech Republic and its significance. The document is open and will be updated as needed to reflect economic and political developments, i.e. it is expected that the list of priority resources will be expanded.

The Raw Material Policy of the Czech Republic in the Field of Mineral Materials and their Resources

The document addresses energy and non-energy raw materials, ore and non-ore commodities. Mineral raw materials obtained from domestic sources, minerals imported to the Czech Republic, minerals obtained from secondary sources through recycling or reworking.

National Renewable Energy Action Plan

Its priority is to address the issue of renewable energy sources.

Priority industries and economic sectors

Agriculture – use of products made from bio-waste (for example, compost) in agriculture is promoted in the waste management plan;

Construction – use of products made from construction and demolition waste (for example, shredded concrete) in the construction sector is promoted in waste management plan;

Automotive industry – reuse of parts from dismantling car wrecks, target for reuse of car wrecks is in the waste management plan;

Energy – the National Renewable Energy Action Plan and the National Energy Efficiency Action Plan, the State Energy Policy of the Czech Republic, National Action Plan for the Development of the Nuclear Energy Sector in the Czech Republic;

Manufacturing industry in general – the Secondary Raw Materials Policy of the Czech Republic, Action Plan to support increasing the Czech Republic’s self-sufficiency in raw-material resources by substituting primary sources with secondary raw materials.

Priority consumption categories

Housing - Relevant policies were successful in reducing the amount of municipal solid waste which is landfilled. The latest focus follows EU policies. Sorting of bio-waste and metals from municipal waste was implemented. All municipalities have a duty to its citizens to enable recycling of bio-waste and metals starting 2015. From 2024 municipal waste landfilling will be banned.

Food and drink – Waste prevention programme

Mobility – National Action Plan for Clean Mobility

Policy framework

National strategies or action plans for material resource efficiency

The topic of resource efficiency has a general basis in the Strategic Framework for Sustainable Development of the Czech Republic. It is included in a number of policies, for example:

1) The Raw Materials Policy of the Czech Republic – which is currently being updated and will be submitted to the Czech Government for approval before the end of 2015, to be followed by the strategic environmental assessment procedure and final adoption.

The subject of this strategy is how to secure the raw materials needed by the state and how to ensure stable, secure and cost-effective access to raw materials for the sustainable development of society. The raw materials necessary for the functioning of the Czech economy are derived from three primary sources:

- a) mineral resources extracted from domestic sources;
- b) mineral resources imported to the Czech Republic;
- c) mineral resources obtained from secondary sources through recycling or reworking.

Third source is the origin for the Secondary Raw Materials Policy (2014) which has already been adopted. This strategy has been developed for a period of approximately 15 years. It would not be rational to establish a strategy for a longer period in a situation where the world market in raw materials is changing dynamically.

In general, within the context of an understanding of the international and European environment, the raw materials policy is formulated in such a way as to secure the necessary mineral resources for the Czech economy, while at the same time allowing the primary commodity industry to develop as required. It also provides an overview of stocks and potential sources of critical raw materials in the Czech Republic. In terms of approaches to search out and use critical raw materials, the preferred method is to prioritise the reuse of waste from former ore mining (slagheaps and tailings ponds) and non-waste treatment technology, for the following reasons:

- access to raw materials;
- lower energy consumption in sorting raw materials;
- synergies from the disposal of environmental burdens while obtaining valuable raw materials;
- the relatively short period of operation prior to extraction;
- comprehensive processing of raw materials.

The document from the 1999, entitled *The Raw Material Policy of the Czech Republic in the Field of Mineral Materials and their Resources* is published on the Ministry of Industry and Trade website at <http://www.mpo.cz/dokument6621.html>.

A complete summary of geological legislation relating to the Raw Material Policy is available from the Ministry of Environment website:

<http://www.mzp.cz/c1256e7000424ac6.nsf/Categories?OpenView&Start=1&Count=30&Expand=8.2#8.2>

2) The Secondary Raw Materials Policy of the Czech Republic – approved by the Czech Government on 15th of September 2014 – published on the Ministry of Industry and Trade website at <http://www.mpo.cz/dokument153352.html>

The document was prepared to create a coherent strategy for the next 20 years, setting out strategic goals for the extraction, processing and use of secondary raw materials from domestic and foreign sources (i.e. imported products). Given the dynamic growth of the market for secondary raw materials, the Secondary Raw Materials Policy of the Czech Republic will be continuously updated, as needed, and an assessment of the measures laid down will be carried out at least once every five years.

Based on previous analyses, 10 commodities and sources of secondary raw materials were selected for the Secondary Raw Materials Policy of the Czech Republic. The selection was

influenced by the importance of the secondary raw materials as technological inputs for manufacture, mass production and the need for and potential use of these commodities in the Czech Republic, their significance in terms of export, etc. The following commodities were included: metals, paper, plastics, glass, construction and demolition materials, energy by-products, ELVs, waste (discarded) electrical and electronic equipment (WEEE), used tyres and waste rubber, waste (discarded) batteries and accumulators.

The Secondary Raw Materials Policy of the Czech Republic is an open document. It is expected to be updated to include additional secondary raw material commodities (such as unused materials and raw materials from the mining industry and others), which are becoming an important resource for the economy of the Czech Republic, the EU and the world.

3) The Action Plan to support increasing the self-sufficiency of the Czech Republic in raw material resources by substituting primary commodities with secondary raw materials

An Action Plan to support increasing the self-sufficiency of the Czech Republic in raw material resources through the substitution of primary commodities with secondary raw materials, setting out 20 specific tasks to fulfil the objectives and measures included in the Secondary Raw Materials Policy of the Czech Republic, has been submitted to the Government.

The implementation of this Action Plan, as well as tasks contained in other strategic documents dealing with raw materials, energy and the environment, will initiate the progressive implementation of the principles of the circular economy in the Czech Republic, which will result in increased resource efficiency and a greater use of secondary resources.

The Action Plan was passed by the Government in July 2015, and the document is published on the Ministry of Industry and Trade website.

<http://www.mpo.cz/dokument160364.html>

4) State Energy Policy of the Czech Republic

The main mission of the State Energy Concept (SEK) is to ensure reliable, safe and environmentally-friendly energy supplies to meet the needs of the Czech population and its economy, at competitive and affordable prices and under standard conditions. At the same time it aims to secure the uninterrupted supply of energy in crisis situations to the extent necessary to ensure the functioning of the most important components of the state and the survival of the population. Finally, its objective is also to ensure a stable and predictable business environment, efficient government and adequate and secure energy infrastructure.

The State Energy Policy identifies strategic priorities, which are intended to contribute to meeting the main objectives. These priorities include: a balanced mix of primary energy and power generation sources based on a broad portfolio; effective utilisation of all available domestic energy resources; maintaining a surplus output balance in electrical power

systems with sufficient reserves and maintaining accessible strategic reserves of domestic forms of energy; increasing the energy efficiency of the national economy; developing the network infrastructure of the Czech Republic within the context of central European states; increasing international cooperation and the integration of electricity and gas markets in the region, including support for the establishment of an effective and functional common energy policy for the EU; support for research, development and innovation to ensure that the Czech energy sector remains competitive; support for education, aiming to ensure that knowledge is handed down to the next generation; improving the quality of technical intelligence in the energy sector; and, finally, improving the energy security and resilience of the Czech Republic strengthening its ability to ensure essential energy supplies in the event of cumulated failures, multiple attacks on critical infrastructure or prolonged periods without fuel supplies.

The State Energy Concept is published on the Ministry of Industry and Trade website:
<http://www.mpo.cz/dokument158059.html>

5) National Renewable Energy Action Plan of the Czech Republic

The National Action Plan for renewable energy has been prepared in accordance with the State Energy Concept of the Czech Republic to comply with, and slightly exceed, the targets set out for the Czech Republic in the Directive on the use of energy from renewable sources in 2020 and to continue to act as a regulator for operational support of the generation of energy and heat from renewable energy sources, following on from Act No. 165/2012 Coll., on subsidised energy sources.

The prepared and updated National Renewable Energy Action Plan of the Czech Republic assumes that energy from renewable sources will represent a 14 % share of gross final energy consumption by 2020 and a 10.8 % share of gross final consumption of energy in the transport sector.

The binding target for the share of energy from renewable sources in gross final consumption of energy in the Czech Republic in 2020, as set out in Directive 2009/28/EC, is 13 %.

The actual value of the share of energy from renewable sources in the gross final consumption of energy was 11.2 % in 2012; and 12.4 % in 2013.

The National Renewable Energy Action Plan of the Czech Republic is now being updated. Final document should be approved by the end of year 2015 or at the beginning of the year 2016.

Link to the Ministry of Industry and Trade website:
<http://www.mpo.cz/dokument120572.html>

6) The National Energy Efficiency Action Plan of the Czech Republic, 2014

The National Energy Efficiency Action Plan (NAPEE) describes the planned measures which aim to increase energy efficiency and the expected or achieved energy savings, including savings during the supply, transmission or transport and distribution of energy, as well as in final energy consumption.

The National Energy Efficiency Action Plan of the Czech Republic is published on the Ministry of Industry and Trade website at <http://www.mpo.cz/dokument150542.html>

7) Waste Prevention Program of the Czech Republic

The Waste Prevention Program (WPP) of the Czech Republic was adopted by the Czech Government 27. 10. 2014. WPP is main strategic document for waste prevention in Czech Republic. WPP is included into Waste Management Plan of the Czech Republic for the period 2015 – 2024. WPP is divided into two main parts. In its analytical part it presents an outline of the strategic and legislative framework and also gives a basic situational analysis of the streams of selected wastes for which the need of a further, more detailed elaboration of how the wastes are to be prevented has been identified. Subsequently, the part devoted to the proposals specifies the objectives as well as the measures required for the implementing thereof. The proposed objectives and measures of the CR Waste Prevention Program react to the analysis performed. Program incorporates 1 main objective, 13 phased targets and 26 draft measures. The measures are concerned with all the three recommended strategies (regulatory, promotional and information strategy); they relate to municipal waste and its various components, with a special focus on food waste, textile waste and compostable materials.

8) Waste Management Plan of the Czech Republic for the period 2015 – 2024

The Waste Management Plan (WMP) of the Czech Republic for the period 2015 – 2024 was adopted by the Government 22. 12. 2014 and entered into force 1 January 2015. The WMP CR consists of the following main parts: introductory part, analytical part, binding part, directive part. The binding part of WMP CR was published as Government regulation No. 352/2014 Coll. and constitutes the mandatory basis for decision-making and other activities of the relevant administrative authorities, regions, and municipalities in area of waste management. WMP CR is the defining document for the development of waste management plans of the regions. WMP CR and Czech waste management legislation are based on the principle of respect for the waste management hierarchy. The strategy and priorities for further development of waste management are determined by the policy framework for the environment, the European requirements, obligations of the Czech Republic, the practical needs arising from the current state of waste management in the Czech Republic and the aspiration to get closer to the European recycling society. Strategic

waste management objectives of the Czech Republic for the period 2015-2024: prevention and reduction of specific waste production, minimizing of adverse effects of waste generation and waste management on human health and the environment, sustainable development of the society and moving closer towards the European "recycling society", maximum utilization of waste as a substitute for primary sources and the transition to the circular economy.

9) Strategy for Growth – Czech agriculture and food industry under the EU Common Agricultural Policy after 2013

This sets out a projected strategy for the implementation of the EU Common Agricultural Policy for 2014–2020, the principles for determining and distributing direct payments and measures under the Czech Republic's rural development programme for the period 2014–2020.

The strategy is published on the Ministry of Agriculture website:

<http://eagri.cz/public/web/mze/ministerstvo-zemedelstvi/koncepce-a-strategie/strategie-pro-rust.html>

Other policies which address material resource efficiency include: Security strategy of the Czech Republic; the Strategy of international competitiveness of the Czech Republic 2012–2020, the State energy policy, the National policy of the Czech Republic for research, development and innovation, the National innovation strategy of the Czech republic, the Strategy of regional development of the Czech Republic, the National action plan for energy from renewable sources, the Transport Policy 2014–2020, etc.

The circular economy and closing material loops

In field of waste management, the Czech Republic implements the hierarchy of waste management as defined in Directive 2008/98/EC on waste, 94/62/EC. In Czech legislation also requirements flowing from Directives 2008/98/EC on waste, 94/62/EC on packaging and packaging waste, 1999/31/EC on the landfill of waste, 2000/53/EC on end-of-life vehicles, 2006/66/EC on batteries and accumulators and waste batteries and accumulators, and 2012/19/EU on waste electrical and electronic equipment have been implemented. These requirements are included in the Waste Management Plan and the Waste Prevention Programme.

The latest legislative changes following the above mentioned requirements are the implementation of metal and bio-waste sorting from municipal solid waste and a ban of municipal solid waste and recyclable and usable waste landfilling since 2024. Within the preparation of a new waste act further measures, such as landfilling fee increase, were discussed.

General policy objectives for material resource efficiency

1) The objectives of the Raw Material Policy of the Czech Republic in the field of mineral materials and their resources:

- Security of supply of raw materials = ensuring essential supplies of primary raw materials for consumers and processors, even when there is a change in the external conditions (resource supply shortages, price fluctuations on the markets, supply disturbances and external attack) within the context of the EU. The objective is to guarantee the rapid resumption of supplies of strategic resources in the event of a failure, while at the same time guaranteeing secure supplies of strategic raw materials held in the state material reserves, to the extent required to ensure the functioning of the economy in emergency situations.
- Competitiveness (raw material industry and social acceptability) = economically acceptable raw material prices for processors and consumers, non-discriminatory access to the global markets for minerals. The competitiveness of European industry as a whole largely depends on competitive supplies of raw materials from domestic (European) and foreign (non-European) sources. One of the EU's main priorities is to maintain this competitiveness.
- Sustainability (sustainable development) = efficient use of domestic raw material resources, which is sustainable over the long term in terms of the environment (no deterioration of its quality), financial and economic sustainability (financial stability of the mining and related sectors of the economy and the ability to ensure the necessary investment in recovery and development, including remediation and restoration), human resources (technical education), social impacts (employment) while at the same time emphasis must be placed on communication with the public (information, involvement of the local authorities, education).

2) Objectives of the Secondary Raw Materials Policy of the Czech Republic

This lays down five strategic objectives and 17 measures to achieve them:

- increasing the Czech Republic's self-sufficiency in raw-material resources by substituting primary sources with secondary raw materials;
- promoting innovation to secure the extraction of secondary raw materials in a quality suitable for use in industry;
- supporting the use of secondary raw materials as a tool to reduce the energy and material intensity of industrial production, while at the same time eliminating negative impacts on the environment and human health;
- initiating support for education to provide qualified workers in the primary commodity sector to support the competitiveness of the Czech Republic;

- updating the scope of statistical findings to produce raw material accounts, which will enable a balance of the volume of secondary raw materials in the Czech economy to be drawn up.

3) Objectives of the Action Plan to support increasing the Czech Republic's self-sufficiency in raw-material resources by substituting primary sources with secondary raw materials.

This sets out 20 specific tasks to fulfil the objectives and measures of the Secondary Raw Materials Policy of the Czech Republic during the period to the end of 2016.

4) Objectives of the State Energy Policy of the Czech Republic

Priority II – Savings and Energy Efficiency

The implementation of these objectives will primarily involve measures such as the replacement of appliances with more efficient versions, the insulation and renovation of buildings, improving energy efficiency of technological processes through the State Energy Concept in industry and increasing the efficiency of energy conversion, as well as reducing losses during the transmission and distribution of energy. There is also a need to encourage changes in consumer behaviour, particularly through improving the general public's understanding of economics and energy. The main stimulus the Czech Republic is planning to use by 2020 is the provision of public funding to support energy saving measures, which, in combination with the legislation, will create a favourable environment for increased energy efficiency.

5) Objectives of the National Renewable Energy Action Plan

The prepared and updated National Renewable Energy Action Plan of the Czech Republic assumes that energy from renewable sources will represent a 14 % share of gross final energy consumption by 2020 and a 10.8 % share of gross final consumption of energy in transport.

6) Objectives of the National Energy Efficiency Action Plan of the Czech Republic (2014)

Based on recent analyses, the national indicative target for the Czech Republic has been set at 47.78 petajoules (13.27 kilowatt hours) of new savings in final consumption of energy to 2020, with the cumulative target equivalent to 191.10 petajoules.

State Environmental Policy:

- to prevent waste generation;
- to increase energy and material utilization of communal waste;
- lower landfilling rate.

Waste management plan:

- Prevention and reduction of specific waste production;
- Minimising the adverse effects of waste generation and waste management on human health and the environment;
- Sustainable development of the society and moving closer towards the European "recycling society";
- Maximum utilisation of waste as a substitute for primary sources and the transition to the circular economy.

Waste prevention programme:

- Information support in waste prevention issues;
- Create conditions and set incentives for lowering material and energy consumption in the manufacturing sector;
- Support of low-waste and innovative technologies;
- Pay maximum attention to food waste and create conditions conducive to a gradual reduction of its volume at all levels of the food cycle;
- Promote the utilisation of service and charity centres and organisations to extend the service life and the re-use potential of products and materials;
- Enhance the active role of research, experimental development work and innovation;

Targets and indicators

Targets for material resource efficiency policies

National Renewable Energy Action Plan

The prepared and updated National Renewable Energy Action Plan of the Czech Republic assumes that energy from renewable sources will represent a 14 % share of gross final energy consumption by 2020 and a 10.8 % share of gross final consumption of energy in transport.

National Energy Efficiency National Plan of the Czech Republic (2014)

Based on recent analyses, the national indicative target for the Czech Republic has been set at 47.78 petajoules (13.27 kilowatt hours) of new savings in final consumption of energy to 2020, with the cumulated target equivalent to 191.10 petajoules.

Secondary Raw Materials Policy of the Czech Republic

Establishes five strategic objectives and 17 measures to achieve them:

- increasing the Czech Republic's self-sufficiency in raw-material resources by substituting primary sources with secondary raw materials;
- promoting innovation to secure the extraction of secondary raw materials to a quality suitable for use in industry;
- supporting the use of secondary raw materials as a tool to reduce the energy and material intensity of industrial production, while at the same time eliminating the negative impacts on the environment and human health;
- initiating support for education to provide qualified workers in the primary commodity sector to support the competitiveness of the Czech Republic;
- updating the scope of statistical findings to produce raw material accounts, which will enable the drawing up of a balance of the volume of secondary raw materials in the Czech economy.

A deadline for completion and an indicator to assess performance are set for each measure.

Waste management plan targets:

- by 2015, introduce separate collections at least for waste paper, plastics, glass and metals;
- by 2020, increase to at least 50 % by weight re-use and recycling of waste consisting of materials such as paper, plastic, metal and glass originating from households, and possibly other waste, if such waste streams are similar to those from households;
- by 2020, reduce the maximum quantity of biodegradable municipal waste deposited in landfills, so that the share of this component is a maximum of 35 % by weight of the total quantity of biodegradable municipal waste produced in 1995;
- by the year 2020, increase to at least 70% by weight the rate of preparing for re-use and the rate of recycling of construction and demolition waste and other types of material recovery, including backfilling, in which materials are replaced;
- increase overall packaging recycling to 70 % by the year 2020;
- increase the overall recovery of packaging waste to 80 % by the year 2020;
- increase the recycling of plastic packaging to 50 % by the year 2020;
- increase the recycling of metal packaging to 55 % by the year 2020;
- achieve 55 % overall recovery of consumer packaging by the year 2020;
- achieve 50 % recycling of consumer packaging by the year 2020.
- achieve in 2016–2021 a minimum level of collection of WEEE – 65 % separate waste collection in 2021'

- ensure a high level of recovery, recycling and preparing for re-use of WEEE by 2018 in accordance with the targets of Directive 2012/19/EU of the European Parliament and Council;
- in 2015–2016 achieve separate collection of 45 % of waste portable batteries and accumulators;
- achieve high efficiency in recycling processes for waste batteries and accumulators from 2015 onwards:
 - lead-acid batteries, 65 %,
 - Nickel-cadmium batteries, 75 %,
 - other batteries and accumulators, 50 %.
- from 2015 onwards achieve 95 % in recovery and re-use and 85 % in recycling in the processing of selected end-of-life vehicles (selected wrecked cars);
- from 2020 onwards achieve 80 % separate collection of waste tyres;
- achieve a 100 % recovery rate in the processing of waste tyres by 2016.

Indicators to monitor use of materials and resource efficiency:

In the field of waste management there is set of indicators for assessing the state of waste management in the Czech Republic and fulfilment of the Waste Management Plan of the Czech Republic and the regional waste management plans published in an annex of the Waste Management Plan. Frequency of evaluation is set at two years. Results will be published in a report on waste management implementation.

As part of the national statistical service in the Czech Republic, which is carried out by the Czech Statistical Office, DMC and RMC indicators are monitored and evaluated. The results are presented on the Czech Statistical Office website – www.czso.cz

Policy instruments

Most important policy instruments for material resource efficiency.

In secondary raw materials policy the following instruments are mentioned for the following discussion:

- Economic instruments:

The Ministry of Industry and Trade is planning to open discussion on the possibility of the progressive implementation of these instruments (preferably with the Ministry of Finance and other ministries) as follows:

- financial support for companies which use secondary raw materials such as compensation of financial costs connected with secondary raw materials manufacturing;
- support of eco-design – grants for companies which implement this tool to their in-house processes;
- grants on innovative manufacturing technologies and public relations for products made from secondary raw materials selling;

The results of will be incorporated in an update of the Secondary Raw Materials Policy, which is due at end of 2016.

- Regulatory instruments:

- legislative duty to use exact amounts of secondary raw materials;
- preference given to buying products made from secondary raw materials for state needs.

- Voluntary instruments:

- public catalogue of subjects on market with secondary raw materials - As one of the main goals of the Action plan to support increasing the Czech Republic's self-sufficiency in raw-material resources by substituting primary sources with secondary raw materials, the development and managing of publicly available catalogue, that will present offers of secondary raw materials, is planned;
- publishing of specialized periodical with information about secondary raw material market, legislative development in this field etc.

In the area of waste management Act No. 185/2001 Coll., the waste act, is the main regulatory instrument. Implementing regulations, the Waste Management Plan and Waste Prevention Programme, are based on it. It also sets out economic instruments such as

landfill fee for hazardous and non-hazardous waste and fees for mixed municipal waste collection. Information-based instruments are highlighted in the Waste Management Plan and Waste Prevention Programme. Another economic instrument is the financial support from the Operational Programme, Environment which supports waste management projects that follow the waste hierarchy.

Examples of good practice

Car battery recycling

An example of good practice is the car battery take-back system organised by the metal works, Kovohutě Příbram a.s. This company organised a broad car battery take-back system across the whole area of the Czech Republic. The main advantage is that Kovohutě Příbram a.s. can also re-manufacture lead contained in car batteries to new semi-finished products and products such as lead bricks, tooth-fillings, lead wool, wire, bars or ammunition. Thanks to this, purchase prices in the take-back system are very attractive and the overall effectiveness of the system is very good.

Textile reuse and recycling

There are three charitable organisations in the Czech Republic that set up textile collections, reuse and recycling – the Czech Red Cross, Charity Czech Republic and Diakonie Broumov. These organisations organized net of ca. 600 containers for separate collections of textiles. Items collected are then redistributed to socially weak groups or if they are not reusable, recycled, for example as secondary raw material for production of carpets or insulation materials.

Red containers for E-waste separate collection

Small-sized WEEE ends its life in mixed municipal solid waste much more often than larger items. An insufficiently dense network for separate collection or insufficiently frequent mobile collection are the reason. Within a project of the ASEKOL company, about 100 red containers for the separate collection of small-sized WEEE were placed in areas with highest population density. Since 2008 ca. 500 tonnes of small-sized WEEE has been collected and the collection of small appliances has increased from 13 to 22.5 %.

VISION 2024

As a good practice initiative, VISION 2024, should be mentioned. VISION 2024 (*VIZE 2024* in Czech) is a platform that has been set up by non-profit organisations, universities and private businesses that wish to offer their skills to support the development of a circular economy in the Czech Republic.

The name of the platform refers to the year 2024 by when the Czech Republic should, pursuant to the new Act on Wastes, dramatically reduce wastes placed in landfills and take a fundamental step

towards the circular economy. The issue should, however, be addressed in a wide context and many related measures should be taken so that the circular economy could go live.

The platform has identified a **Decalogue of circular economy – key assumptions for the operation of a circular economy in the Czech Republic**

The principles of the circular economy are the efficient handling of wastes and, in particular, the reuse of wastes. In order to introduce a circular economy and the circular model in the Czech Republic, it is necessary to:

1. increase the support for the recycling material markets;
2. increase dramatically the reuse and recycling of communal wastes – up to 70 %;
3. focus on tax and investment incentives which support the reuse and recycling of wastes;
4. recycle at least 80 % of all packaging;
5. support development of new technologies through strategic cooperation between the industry, universities and research and development (R&D) institutions;
6. develop requalification programmes for the unemployed;
7. create educational programmes for grammar schools, high schools, universities and training institutions;
8. eliminate landfilling of reusable resources by increasing the minimum landfill fee to 1,350 CZK per tonne of landfilled wastes;
9. reduce the permitted use of wastes for the technical securing of the landfills;
10. use the funds from the EU, as much as possible, for the construction and modernisation of waste infrastructure.

Preference for buying products made from secondary raw materials for state needs

In 2010, Czech Government adopted Decision No 465/2010, Rules for implementing the environmental requirements in public procurement of state and local administrations. These are based on:

- European Commission’s Communication on public procurement for a better environment;
- European Commission’s Green Public Procurement (GPP) Toolkit

According to the Rules, the state administration should consider environmental aspects when purchasing specific products and services. In general, if a detailed methodology is not available, priority should be given to eco-labelled products (Ecologically Environmental Product (CZ), The Flower (EU), Der Blaue Engel (DE), Nordic Swan, etc.) and products made from recycled materials. For IT products and office furniture, detailed methodologies were created as a pilot. For illustration purposes, the report on the proportion of public procurement according to the methodology (GPP) on total public procurement (PP) in the Czech Republic was evaluated for 2009–2011 period (Tables 1 and 2 below).

Table 1 - Public procurement for IT equipment

Year	GPP [CZK]	PP Total [CZK]	GPP share
2009	345 595 951	462 524 526	75 %
2010	358 646 128	470 021 738	76 %
2011	370 550 507	476 672 546	78 %

Table 2 – GPP for furniture

Year	GPP [CZK]	PP Total [CZK]	GPP share
2009	70 214 164	182 548 633	38 %
2010	66 035 057	114 454 441	58 %
2011	59 942 070	107 008 089	56 %

Institutional setup and stakeholder involvement

Institutional set up for material resource efficiency policies

The Ministry of Industry and Trade coordinates policies in the area of resource efficiency including energy efficiency and secondary raw materials. The Ministry of the Environment is responsible for waste policy and for reduction of environmental risks, for example through supporting recycling. There is collaboration between both ministries in area of resource efficiency.

Energy is covered separately from resource efficiency; the National Action Plan for Energy Efficiency was approved.

Process to ensure stakeholder participation

During preparation of new legislative documents and conceptual materials proposals go through an interdepartmental comment procedure. Within this various stakeholders are addressed – in addition to state institutions, employer associations, non-governmental organisations (NGOs) and others are involved in the discussions.

In case of important concepts, such as Secondary Raw Materials Policy or the Waste Management Plan there must be also a strategic environmental assessment process. Part of this process is public hearing, at which everyone can comment. At governmental level, there working groups exist, such as the Waste Management Council, the Council for Energy and Raw Materials Strategy and many others addressing specific problems, in which non-ministerial members can comment and influence the policy or legislative proposals.

Members of Working Group 5 For Secondary Raw Materials, established by the Government Council For The Energy And Raw Material Strategy of the Czech Republic, as well as members of the Council for Secondary Raw Materials and Waste, established by the Working Team For Economic Policies, and the Council of Economic and Social Agreement of the Czech Republic participated in the preparation of the Secondary Raw Materials Policy of the Czech Republic and Action Plan. These include representatives of industrial unions, associations, federations, ministries, business and labour unions, trade unions, the Chamber of Deputies and others. These documents were also discussed by members of the Government Council for Energy And Raw Material Strategy of the Czech Republic, whose members include representatives from industry, business and labour unions, as well as NGOs.

Suggestions for international support mechanism to exchange experience and share lessons from the implementation of material resource efficiency policies

Utilise European funds to support the exchange of experience and pilot projects. For the Czech Republic this could be of interest, for example, for local authority programmes supporting resource efficiency at the local level (for example the ECOPROFIT or Eco Business Plan Vienna).

Examples of support mechanisms and programmes from other countries that could be beneficial in the Czech Republic as well:

- higher fees for landfilling (for example, BE, DK, FI, IE, AT, SE, UK);
- reuse Credits (UK);
- tax incentives (for example, NL – MIA and VAMIL schemes);
- support of industrial symbiosis (DK);
- green public procurement (UK, DE, AT, NL);
- support of technical assistance (UK – WRAP; DE – EFA NRW; AT – ECOPROFIT, EcoBusiness Plan Vienna; UK and NL – support programmes for eco-design), including on-line free tools;
- support of voluntary agreements at sectoral/commodity basis (UK, NL, DK, FI).

Optional questions

Which way should resource efficiency go in the future?

- Circular economy and new business models
- Environmental tax reform (as an important prerequisite)