

## **SUMMARY OF THE STUDY OF THE SCALE AND EFFECT OF THE EC DIRECTIVE 2000/14/EC ON THE APPROXIMATION OF THE LAWS OF THE MEMBER STATES RELATING TO THE NOISE EMISSION IN THE ENVIRONMENT BY EQUIPMENT FOR USE OUTDOORS IMPLEMENTATION IMPACT INTO THE LITHUANIAN ECONOMY**

In the course of preparation of the Republic of Lithuania for the accession to the European Union, besides other problems, there is a necessity to restrict the noise emission in the environment by equipment for use outdoors. This task is solved by implementation the EU Directive 2000/14/EC relating the noise emission in the environment by equipment for use outdoors into the Lithuanian legislation. The goal of the Directive is to co-ordinate laws of the Member States on noise emission standards, procedures for the conformity assessment, labelling, technical documentation. In order to decrease noise emission in the environment by equipment for use outdoors the Directive prohibits placing on the market as well as use of equipment listed in the Annex 1 to the Directive. The CE marking shall be provided only for the equipment satisfying the EC requirements according to the Directive procedures. Article 12 presents list of equipment with limit values meanwhile the Article 13 lists equipment subject to noise marking only. The Annex III lays down the methods of measurement of airborne noise (standards type B) as well as additional conditions for testing code (standards type C).

Impact assessment of implementation of the EU Directive 2000/14/EC which sets approximation of the laws of the Member States relating to the noise emission in the environment by equipment for use outdoors into the Lithuanian economy is presented in the study.

The study:

- describes the legal acts that are necessary for full implementation of requirements of the Directive 2000/14/EC as well as institutions responsible for implementation of the legal acts;
- fulfils the analyse of requirements of the EU Directive 2000/14/EC and acoustical requirements of legal acts to be implemented;
- conducts investigation for the assessment of the expected impact of implementation of the Directive 2000/14/EC on the Lithuanian interested groups (producers of equipment for use outdoors, importers and users);
- presents investigation of trends of the manufacturing and use of outdoor equipment in 1990 – 2000 as well as use of the equipment park in Lithuania;
- provides identification of importers and producers of the equipment for use outdoors;
- accomplishes economic analysis of the equipment produced in Lithuania for use outdoors in 1999 – 2000;
- calculates the maintenance costs and economic consequences caused by implementation of the Directive 2000/14/EC.

### **For transposition of requirements of the Directive 2000/14/EC into the Lithuanian legislation there is a need of what follows:**

- technical regulation of the equipment for use outdoors approved by the Ministry of Environment relating conformity to provisions of the Directive and repealing validity of the contradicting documents;
- amendment of Articles 81 and 82 of the Civil Code on the legal responsibility for the noise generation by equipment for use outdoors and naming concrete normative documents with established noise level;
- since the rules of the conformity assessment are presented in the EU Directive, they should, therefore, be included into the existing national certification statute;
- it is concluded that there is no need for the transitional time period, solely the technical regulation of the equipment for use outdoors shall be soon prepared and approved.
- the assignment of an institution responsible for the implementation and supervision of technical regulation of the equipment for use outdoors.

In order to implement Directive 2000/14/EC approved by the European Parliament and European Council on May 8, 2000, the Member States at first shall transpose its requirements into the national legislation and to organise determination of noise emission by equipment for use outdoors according to the European standards, conformity assessment for the CE labelling and acknowledge their implementation.

### **Responsible institution for implementation of the EU Directive 2000/14/EC**

The institution for customers' protection and supervision of the business activity should be extended. Establishment of the individual certification body is needless. New functions should be attached for the existing institutions, including empowering for the CE mark affixing and determination of the noise indicators. Building Products Certification Centre can be entrusted with this responsibility.

Additional 2 experts should be employed for a job consisting of examination of the equipment for use outdoors manufactured enterprises and importers (technical check of documents, search of the additional information and analysis), organisation of the CE marking and approval, conformity control of the CE marking and acknowledgement. Determination of the noise by equipment for use outdoors according to the European standards shall be organized. The existing already accredited Acoustic Laboratory should be modernised and its field of accreditation shall be expanded for tests of the noise emission by equipment for use outdoors.

### **Analyse of requirements of the EU Directive 2000/14/EC and acoustic requirements of legal acts to be implemented**

There is made a list of reference documents (15 standards) including 4 already translated and approved documents as Lithuanian standards.

The analysis is made for the 84 Lithuanian legal acts and codes; it shows that noise emission limitation according to the sound power levels really was not carried out when preparing new documents by EU Directives. Almost all legal acts up to now have regulated noise with the hygiene code HN 33:1999 (since 2002 code HN– 33:2001 enforced) *Acoustic Noise. Allowable Levels in the Residential and Working Environment. General Requirements for Noise Measurements*. The code essentially is based on GOST definitions and measurement methods of the sound pressure level. There is declared conformity with the European legal acts and the apply obligation for objects to be attested, though there is no real binding with the EU Directive 2000/14/EC. State institutions, responsible for market surveillance and import procedures and taking into consideration the sound power level, as noise indices, have not been found.

There are identified valid Lithuanian legal acts with noise regulation in accordance with the sound pressure level; they will be harmonised with other European noise policy implementing documents, and, therefore, will be not influenced by the Directive 2000/14/EC.

### **Expected impact assessment of the implementation of EU Directive 2000/14/EC**

After interview with interested groups of the Republic of Lithuania (producers of equipment for use outdoors, importers and customers) on the expected impact assessment related to the implementation of EU Directive 2000/14/EC, the following findings were made:

- only importers from EU countries are acquainted with the noise abatement requirements and only leaders of enterprises, know the Directive, and make estimations of its impact in the future;
- only few importers from the CIS and other East countries are sufficiently aware of the problem. They either do not have any opinion on the Directive at all or have a negative one;
- not all heads of manufacturing enterprises have heard yet on problems of carrying out the noise limitation for equipment, besides they are very poorly informed on the European noise policy necessity, and consider the implementation of the Directive as formality, new bureaucracy barrier and hardly imagine its consequences;

the expected results are estimated by some 80 per cent of enterprises, no impact is reported by 5 per cent and 15 per cent do not have their own opinion; part of customers, who are buying production without any noise guaranteed value, actually do not have any knowledge relating noise and permitted noise levels or the current noise situation satisfies them.

Importers from the EU countries assume that implementation costs of the Directive requirements will not grow. Manufacturing enterprises and exporters to the EU countries estimate the costs rising up to 5 – 10 per cent. The similar growth is foreseen by customers, who use equipment from CIS countries.

The analyses show that the Directive requirements will affect rather big number of the Lithuanian enterprises and their staff. However, bigger production volumes are being dealt by quite small part of the large-scale importers, dealing with West countries, meanwhile the bigger part of the identified domestic producers does not produce significant volumes of equipment for use outdoors in the general turnover of enterprises.

### **Economic indicators of activity regulated by legal acts**

Conclusion has been made that manufacturing of equipment for use outdoors has decreased in Lithuania since 1990 up to 2001 by dozens folds. Some enterprises took attempt to reorganize export of their products into the West countries, however, they could not withstand competitiveness and went bankrupt. A part of enterprises started production of components instead of whole products, other tried to increase or update the production.

The similar situation is with the park of equipment for use outdoors - decreased at an average by 50 per cent between 1985 – 2000. Lack of financial means for renewal of the equipment park forced customers of the equipment (building companies and municipal enterprises) to organise repair of existing equipment or to purchase second hand equipment for use outdoors from East and West sellers and only in seldom cases they purchased new equipment since the prices are at an average by 60 per cent higher in EU countries.

Concerning the usage period of the main equipment it is noticed that up to 61 per cent of the equipment are being used for 10 – 25 years and only 39 per cent – up to 10 years. There is some fear that after introducing a limitation of the usage time for equipment there may be need to change more than 60 per cent of the existing equipment within the short period. A conclusion is made that in order to renew the equipment park it would be most purposeful to import the equipment from West countries since it is provided with indication of the noise level and CE marking procedures are made according to the Directive 2000/14/EC. Therefore, the renunciation of the cheap import from other countries is possible.

Analysis of trade flows in 1995 – 2000 shows as follows:

import of equipment increased by 2.25 folds, including 2.2 folds from EU countries, 2.2 folds from CIS and Baltic countries, 3-folds from other countries. The total import from EU countries decreased from 75 per cent in 1995 to 72 per cent – in 2000 and accordingly import from other countries increased from 25 per cent to 28 per cent;

export of equipment decreased by 63 per cent, including 40 per cent to EU, 85 per cent – to CIS and Baltic countries, meanwhile export to other countries increased by 2.6 folds.

Some 200 enterprises importing various building equipment, municipal technique, transport and electricity machinery including equipment for use outdoors, etc. have been identified in Lithuania. Enterprises trading with such equipment only (at least up to 90 per cent in their total turnover) form not more than 20 per cent. Summarising opinion says that the implementation of the Directive 2000/14/EC will make influence upon some 400 enterprises. The general turnover of the 400 enterprises, according to estimations, is not less than 1 billion Lt, however, the equipment for use

outdoors will comprise only some 10 per cent. Number of employees totals 8000. It is supposed that the principal part of the enterprises shall experience the impact of the Directive only in small scale.

### **Volume of activity of equipment produced in Lithuania for use outdoors in 1999 – 2001**

In 2001 8 enterprises produced 8 groups of equipment for use outdoors of 57 listed in the Directive. Totally, 10 groups of main type of equipment are being produced. There are no small-scale producers.

The value of production of equipment, manufactured in 2000, was about 9 million Lt

Production of equipment for use outdoors increased in 2001 by 59 per cent compared to 1999 due to organisation of renewed production in early bankrupted enterprises;

53 per cent of production is sold in domestic market;

In total volume of the own production of equipment, including export, makes up 2.8 million Lt or 3.3 per cent;

Value of equipment produced in 2001 to which allowable noise power level shall be defined (excluding snow-removing machine and road milling machines with declared noise level) made up 5.7 million Lt or 63 per cent of the total produced quantity.

47 per cent of the local production of equipment (worth of 2.5 million Lt) and 9.1 million Lt of re-export went for export in 2000. Provisions of the Directive 2000/14/EC will have influence on 30 percent of production being manufactured and re-exported to EU countries and provisions of the Directive for these products shall be implemented. In future after accession into EU, the proportion will increase additionally up to 43 per cent

The total consumption of the equipment for use outdoors in Lithuania was for 83.9 million Lt in 2000, including import from EU countries – 67.3 million Lt (72.0 per cent) and from remaining countries – 25.4 million Lt (28.0 per cent).

Implementation of the directive will not have influence 2/3 of import amount and import flow for about 25.4 million Lt will be limited in case if provisions of the Directive will not be implemented in Lithuania but made possibilities for the CE marking procedures.

### **Conformity assessment costs**

Enterprises will be affected by factors appearing due to implementation of the Directive or they should stop production. The unavoidable modernisation of products and technology, additional laboratory tests, additional administrative procedures, organisation of quality assurance system is on agenda.

Renewal of production and technology, related to requirements of the Directive 2000/14/EC will cost at an average 15,000 – 25,000 Lt. 10 equipment units to which 8 enterprises shall allocate not less than 10,000 Lt per unit for tests in accredited laboratory, however with a condition, that state support will be allotted for the laboratory modernisation (about 0.4 million Lt). Without the state aid the sum may increase up to 30,000 Lt.

For the Lithuanian producing enterprises the yearly costs of operations under the Directive in the first year after requirements introduction will increase not more than 0.6 – 1.0 million Lt.

In case if no accredited laboratory will be in Lithuania which could co-operate with the Certification Centre and products should be transported to the laboratories located abroad, the additional costs shall increase at least twice and will reach 1.2 – 2.0 million Lt.

Costs of fulfillment of the Directive requirements in the Lithuanian enterprises, producing equipment for use outdoors, according to calculations will make up 1.0 – 1.4 million Lt per year. That means that existing cost (9 million Lt) will increase by 11 –15 per cent and the profit will decrease. It is expected that increase of costs will be short-term and later on the new conditions will increase competitiveness and profitability of the production. After measures for renewal of production and

technology will be implemented, the possibilities for export of these products to EU countries will increase. Prices of products exported to EU countries are by 10 per cent higher than exporting into the East market, therefore, income from the export will increase by 0.1 – 0.2 million Lt or 1 – 2 per cent of the total volume.

Execution costs of the Directive requirements in importing companies and enterprises, that use outdoors' equipment, with the yearly turnover of 92.7 million Lt will increase by 1.8 – 3.6 million Lt or 2 – 4 per cent. It is related to the fact, that due to inadequacy of part of equipment to the Directive requirements, import from other countries will decrease by 3 – 6 million Lt, however, import from EU countries, in order to satisfy the import deficit of 3 – 6 million Lt, should increase by 1.8 – 3.6 million Lt, because costs of equipment for use outdoors in EU countries are higher by 60 per cent at an average.

For administrative procedures and laboratory tests will cause additional 0.65 – 0.9 million Lt, this will increase costs by 0.7 – 1 per cent.

Additional financing for execution of the Directive requirements in the State Non-food Products Inspection and Certification Centre, the accredited sound power measurement laboratory, conformity assessment provided by third part, translation and adaptation of harmonised and reference standards will comprise 0.82 million Lt. After all needs assessment the additional yearly costs will make 4.17 – 6.52 million Lt or 3.7 – 5 per cent of the yearly turnover.

In the trade flows evaluation the changes are expected as follows:

Manufactured in Lithuania and locally sold volumes of production should increase due to decrease of import volumes from CIS and similar countries. It will be reasonable to compensate the difference by increasing the renewed and manufactured in Lithuania production from 9.0 million Lt to 12 million Lt including sold products from 2.8 million Lt to 4 million Lt;

Import from EU countries will increase by 4.8 – 9.6 million Lt;

Import from CIS will decrease by 1–3 million Lt;

Import from other countries will decrease by 2-3 million Lt;

Export to EU countries will increase by 1-2 million Lt;

Export to CIS will stay without changes;

Export to other countries will increase by 1 million Lt;

Due to the imported product price differences between EU and CIS or Lithuania, it will be economically reasonable to broaden manufacturing of renewed and satisfying the Directive requirements products in Lithuania, as well as increase the import from EU of second hand equipment and their repair works;

Import costs will increase only due to CE marking surveillance.

Costs increase due to Directive requirements implementation will not be higher than 11-15 per cent.

The Lithuanian market shall be protected from equipment for use outdoors that is not satisfying the Directive requirements; therefore, there should be intensive development of systems for the market surveillance and import control. For the mentioned reason an institutional structure and efficient market surveillance procedures should be established. The institution for the consumers' protection and business units' supervision shall be enlarged. The co-operation between the Customs Department, the State Non-food product inspection and corresponding certification office shall be legitimated.

The experience shows that the adaptation period will take place before the interest groups affected by the Directive will adequately understand the necessity of the European noise policy, especially taking into account the burden of the institution reorganisation.

Thanks to the EU noise directives a framework of legal acts will be established with the aim to protect an ordinary citizen from the high noise level.

**Structure of the Study**

Structure of “Study of to the scale and effect of the EC Directive 2000/14/EC on the approximation of the laws of the member states relating to the noise emission in the environment by equipment for use outdoors implementation impact into the Lithuanian economy” consist of 6 chapters, summary in Lithuanian and English, 49 text pages, 8 figures, 16 tables. The Annex consists of 6 parts. 5 publication sources are mentioned in the Study. The total volume of the Study comprise 103 pages.