

PA - ABM - 045
ISA 78933

RMA/LITH-PR-02

ENERGY PRICE REFORM WORKSHOP TRIP REPORT - LITHUANIA

Contract No. EUR-0015-C-00-1006-00

Prepared for:

**United States Agency for International Development
Washington, D.C.**

June 1992

Prepared by:



RESOURCE MANAGEMENT ASSOCIATES
of Madison, Inc.

PA - ABM - 045

len - 78933

ENERGY PRICE REFORM WORKSHOP TRIP REPORT - LITHUANIA

Contract No. EUR-0015-C-00-1006-00

Prepared for:

**United States Agency for International Development
Washington, D.C.**

June 1992

Prepared by:

Resource Management Associates of Madison, Inc.

520 University Avenue, Suite 300. Madison, WI 53703, U.S.A. Telephone: (608)283-2880 Facsimile: (608)283-2881 Telex: 469 453

PREFACE

The work in this report is being carried out within the framework of the U.S. Emergency Energy Program for Eastern and Central Europe and the Baltic Republics under a RMA contract with the U.S. Agency for International Development. RMA, as Prime Contractor to USAID, is currently implementing the **Energy Pricing Reform Project** and the **Industrial Energy Efficiency Project** in Romania, Czechoslovakia and Lithuania. This report is one of a series describing the activities, results and recommendations of the projects.

The purpose of the Energy Price Reform Project is to provide to the Government of Lithuania an analytical basis for understanding energy flows in the Lithuanian economy, underlying costs in the provision and use of energy, major environmental consequences of alternative energy strategies, appropriate price levels and economic responses to energy prices, and other information to support the transition to a market-based pricing system.

The purpose of the Industrial Energy Efficiency Project is to rapidly bring expertise, advanced equipment and modern concepts of energy efficiency directly to a cross section of industrial facilities. The program is concentrated on low-cost/no-cost problems which could be remedied with expertise and equipment at hand. Significant potential for improvement was demonstrated while RMA engineering teams were on-site.

This report describes the activities and accomplishments of an energy price reform workshop held in Lithuania from April 30 to May 7, 1992. The workshop addressed six specific issues of concern related to energy price reform. As part of the effort, scenarios were developed of the evolution of the Lithuanian economy in response to the dramatic increases in energy and other prices that are occurring.

This is a working document published informally by Resource Management Associates of Madison, Inc. (RMA). To present the results of the project with the least possible delay, this report has not been prepared in accordance with procedures appropriate to our formally printed documents. Some of the technical tables in the Appendices, primarily of interest to the Lithuanian energy community, have not been translated to English. This report has received only light review, in the interest of timeliness.

Table of Contents

| | | |
|------|--|----|
| I. | Introduction | 1 |
| II. | Overview of Energy Price Reform Situation and Workshop Discussions | 3 |
| III. | Electricity and Thermal Tariffs | 7 |
| | A. Issues Regarding Current Tariff Development | 7 |
| | B. Findings | 11 |
| | C. Policy Issues Regarding Tariff Development | 12 |
| IV. | Macroeconomic Structural Adjustment to Energy Price Reform | 13 |
| | A. Progress Review Meeting | 13 |
| | B. Analysis Meeting | 15 |
| | C. Macroeconomic Analysis | 16 |
| V. | Establishment of Lithuanian Energy Balances | 18 |
| VI. | Recommendations | 19 |
| | A. Project Recommendations | 19 |
| | B. Broader Recommendations | 20 |

List of Tables

| | |
|---|----|
| Table 1. Lithuanian Energy Prices 1990 to Spring 1992 | 4 |
| Table 2. Energy Price Comparison - Lithuanian prices with OECD and US prices .. | 5 |
| Table 3. Changes in Output Prices Caused by Fuel Price Increases | 14 |

List of Appendices

Appendix A
Summary of Meetings

Appendix B
Workshop Schedule

Appendix C
Workshop Attendees and Subgroups

Appendix D
European Energy Charter

Appendix E
Bibliography

Appendix F
Results of "Preliminary" Analysis of New Fuel Prices on Overall Prices

Appendix G
National Income and Product Accounts: 1989-1992 (2nd Quarter)

Appendix H
Price Indexes for Goods and Services: 1991-1992

Appendix I
Monthly Price Increases for All Goods and Services: January 1991-February 1992

Appendix J
Monthly Purchasing Power of the Ruble: January 1991-February 1992

Appendix K
Estimated Minimum Cost of Living Per Capita: March 1992
This information is currently used as the basis for determining wages in all branches.

Appendix L
Comparison of Consumption of Final Product in the Soviet Union, West Germany and Lithuania: 1988

Appendix M
Fuel and Petroleum Import and Export Prices: 1991

Appendix N
Fuel and Petroleum Import and Export Prices: May 2, 1992

Appendix O
Transaction Table for the 30 Sector Model

Appendix P
Output of 30 Sector IO Model Analysis

I. Introduction

The purpose of the Energy Price Reform Component of the USAID Emergency Energy Assistance Program for Eastern Europe is to assist countries in their transition to market economies by reforming energy prices and rationalizing their energy policies and management. Three consultants from Resource Management Associates of Madison, Inc. (RMA) and the Tellus Institute traveled to Lithuania to participate in the Workshop which was held during the period April 30 to May 7, 1992. Dr. Mark Hanson, project leader, and Dr. Jack Huddleston attended from RMA and Mr. Carlton Eartels came from the Tellus Institute. A daily summary of meetings is provided in **Appendix A** and a final workshop schedule in Lithuanian and English is provided in **Appendix B**.

The RMA Team collaborated with Government of Lithuania (GOL) institutions through the Lithuanian Energy Price Reform Working Group, chaired by Mrs. Ada Macezinskiene of the Ministry of Energy. Workshop participants represented a broad cross section of energy and academic institutions including the Ministry of Energy, the Ministry of Economy, the Ministry of Finance, the Ministry of Environment, the National Power Board, the Lithuanian Energy Institute (formerly the Soviet Academy of Sciences in Kaunas), and the University of Vilnius. A list of the workshop attendees and their workshop groups is provided in **Appendix C**.

This report describes the activities and results of the workshop as well as recommendations for the remainder of this project and beyond. In addition to this report, there is a set of complementary workshop materials which were provided to the working group in Vilnius. These complementary materials are:

- **Main Workbook: Energy Price Reform Workshop** (previously provided to USAID).
- **Volume I: Legal and Operational Aspects of Energy Utility Regulation** (previously provided to USAID). This volume is a collection of up to date federal and state statutes on market based regulation of energy utilities and a selection of environmental legislation. The volume provides assistance in one of the six areas identified as a need by the Lithuanian Working Group, namely on market based regulatory institutions.
- **Volume II: Legal and Operational Aspects of Energy Utility Regulation** (previously provided to USAID). This volume is a collection of articles on market based regulatory practice in the U.S., including pricing and least-cost planning.
- **Gas Rate Fundamentals** by the American Gas Association. This is the primary reference source in the U.S. on the pricing of natural gas, including

the pricing of the transport of natural gas. Under different terminology, it includes the pricing of what are called transit fees as they would most logically be set under the European Energy Charter (**Appendix D**). Transit fees were an issue identified by USAID and the Working Group.

- Electric Utility Costing and Rate Making: Methods and Procedures, Costs and Rates Workbook, Part I: Textbook. This material was written by ICF, Inc. for EPRI (Electric Power Research Institute). This material, along with the natural gas pricing materials, was provided as part of the assistance in electricity and thermal tariff design.
- Electric Utility Costing and Rate Making: Methods and Procedures, Costs and Rates Workbook, Part II: Learner's Guide. This material has the same authorship and purpose as stated above.
- Natural Gas Prospects and Policies, by the International Energy Agency. The book discusses recent developments in natural gas industries in the OECD, including the forms of contracts, price levels, regulatory structures and environmental concerns.
- Energy Economics and Technology by P. Lebel. This is a graduate level university textbook on energy economics.
- Environmental and Natural Resource Economics by T. Tietenberg. This is a mid-level university text on environmental economics.

Full citations for the above materials are included in the Bibliography of materials provided in **Appendix E**.

Section II of this report is a review of the major issues discussed as part of the workshop. **Section III** is a more specific treatment of the status of electricity and thermal tariff design process. **Section IV** is a treatment of the macroeconomic consequences of energy price reform, including the impact of energy price changes on other prices in the economy. **Section V** summarizes the work to date by the Lithuania Energy Institution and RMA's evaluation of that work. **Section VI** provides recommendations for the remainder of the project and for follow on activities by USAID and others.

II. Overview of Energy Price Reform Situation and Workshop Discussions

The Energy Price Reform Reconnaissance Trip Report-Lithuania of March 1992 noted that large price increases had been instituted in an attempt to move toward international price levels. The difficulty of setting prices in the current volatile situation is reflected in the fact that two more sets of price revisions have been put in place since January 1992 (January 1992 prices were provided in the March 1992 trip report), and a third revision was being completed while the team was in the workshop. The energy price changes from 1990 to April 1992 are shown in *Table 1* in rubles. April 1992 prices are compared to 1991 US and OECD energy prices expressed in rubles.

Table 1 demonstrates that further major price adjustments have occurred since January 1992. Industrial and gasoline prices have increased by about a factor of three from January to April. Household prices for electricity and thermal energy, however, have been held relatively stable. These price increases come in addition to price increases of a factor of ten or more between 1990 and January 1992 as shown in *Table 1*.

Despite these massive price increases, energy prices remain far below OECD prices except for the price of thermal energy to industry which is far above OECD prices as shown in *Table 2*. Heavy fuel oil and natural gas prices to industry, for example, would have to increase by another factor of three in order to reach OECD levels using an exchange rate of 90 rubles to the dollar.

Discussions with Ministry Officials and with workshop participants indicate that national budgetary issues are continuing to force price revisions. The GOL can not afford to provide a massive overall subsidy to energy users. Thus, it is forced to pass imported energy costs on to consumers, although it is evident that residential users are being protected to some degree with the shortfall being made up from the national budget and/or by cross subsidy by industry.

Prior to the introduction of a national currency (the Lit), a policy of passing all costs through to consumers is, arguably, a reasonable policy. To immediately do more, i.e. move to border prices or OECD prices raises the possibility of **price overshoot**. Price overshoot is defined as setting prices above market levels and thereby unnecessarily damaging the economy and inflicting pain in consumers.

Price overshoot could occur under present conditions because of the collapse of the ruble and, therefore, its ability to operate as a properly functioning currency. In this situation, the ruble/dollar exchange rate may significantly understate the strength of the Lithuanian economy vis-a-vis the economy of the former USSR. If energy prices were set at OECD prices shown in *Table 2*, and Lithuania subsequently introduced the Lit which has a value higher than the ruble, then the resulting ruble related energy prices would have to be reduced because of the greater strength of the Lit. How strong the emergent Lithuanian

Table 1. Lithuanian Energy Prices 1990 to Spring 1992

-taxes not included

| Sector | Fuel | unit | 1990 Ruble/ | 1991 Ruble/ | January 1992 Ruble/ | February 1992 Ruble/ | April 1992 Ruble/ | notes |
|------------|----------------|------------------|----------------|----------------|---------------------------|----------------------------|-------------------------|-------|
| Transport | | | | | | | | |
| | Gasoline | litre | 0.4 | 4 | 4 | 10 | 13 | 1 |
| | Diesel | litre | 0.3 | - | - | - | - | |
| Industrial | | | | | | | | |
| | Gasoline | litre | 0.2 | 0.5 | 4 | 10 | 13 | 1 |
| | Diesel | litre | 0.12 | 0.4 | 3 | 8 | 8 | |
| | Light Fuel Oil | tonne | - | - | - | - | - | |
| | Heavy Fuel Oil | tonne | 30 | 84 | 1320 | 3000 | 4500 | 2 |
| | Electricity | Kwh | 0.023 | 0.082 | 0.35 | 0.44 | 1 | |
| | Natural Gas | k m ³ | 22.5 | 51 | 1000 | 1000 | 3400 | |
| | Steam Coal | tonne | 12 | 12 | 72 | 88 | 192 | |
| | Coking Coal | tonne | - | - | - | - | - | |
| | Thermal | Gcal | 14.85 | 59.8 | 284.5 | 407.5 | 847 | 3 |
| Household | | | | | | | | |
| | Electricity | Kwh | 0.04 | 0.06 | 0.35 | 0.35 | 0.5 | |
| | Thermal | Gcal | 3.95 | 12 | 48 | 48 | 48 | 3 |

- notes comments
- 1 92 octane
 - 2 oil (burning price)
 - 3 average of prices from Siluma & Lithuanian energy system

Source Lithuanian Government

Table 2. Energy Price Comparison - Lithuanian prices with OECD and US prices

| Sector | Fuel | Lithuanian Prices April 1992 Rubles/ | 1991 OECD Prices @120R/US\$ Rubles/ | 1991 US Prices @120R/US\$ Rubles/ | 1991 OECD Prices @90R/US\$ Rubles/ | 1991 US Prices @90R/US\$ Rubles per |
|------------|----------------|---|--|--|---|--|
| Transport | | | | | | |
| | Gasoline | 13 | 103.41 | 34.15 | 77.56 | 25.61 litre |
| | Diesel | - | 70.09 | 35.61 | 52.57 | 26.71 litre |
| Industrial | | | | | | |
| | Gasoline | 13 | | | | litre |
| | Diesel | 8 | | | | litre |
| | Light Fuel Oil | - | 45909 | 29550 | 34432 | 22163 tonne |
| | Heavy Fuel Oil | 4500 | 18995 | 9926 | 14246 | 7444 tonne |
| | Electricity | 1 | 7.65 | 5.70 | 5.74 | 4.27 Kwh |
| | Natural Gas | 3400 | 16905 | 11393 | 12679 | 8545 k m ³ |
| | Steam Coal | 192 | 10759 | 4939 | 8069 | 3704 tonne |
| | Coking Coal | - | 6940 | 4662 | 5205 | 3496 tonne |
| | Thermal | 847 | 203.81 | | 152.86 | Gcal |
| Household | | | | | | |
| | Electricity | 0.5 | 13.22 | 10.27 | 9.91 | 7.70 Kwh |
| | Thermal | 48 | 298.92 | | 224.19 | Gcal |

economy will be is, of course, highly uncertain. In part, it will depend on the willingness of western market economies to reduce or eliminate trade barriers for products where Lithuania could be a strong player, e.g. milk and meat products.

If energy prices are only raised as far as necessary to recover costs, then energy pricing will have to remain a month to month issue for the time being because **the quantities of energy to be imported from the NIS have been set for 1992, but the price to be paid has not been set.**

Workshop discussions revealed that allowed profits, which are relatively small by market economy standards, have been further reduced in order to reduce the burden of energy prices on consumers. This problem is further complicated by the extremely low utilization levels of much of the energy system due to the rapid decline in economic activity, private consumer consumption, and conservation measures that are being taken. The result is that energy firms are being starved, in other words no retained earnings are being allowed.

Depriving energy companies of retained earnings may be a beneficial outcome if the earnings would have been invested in unneeded capacity additions. It is not beneficial, however, if needed improvements and maintenance, which lower costs, are foregone or if investment in efficiency measures can not be made. **One of the important outcomes of the workshop was further elaboration and discussion of the need for meters and control equipment and the energy and cost savings that could result.**

The thermal energy utilities have conducted analyses indicating that investments in meters and controls would result in a payback of a year or less. Evidence for this proposition is supported by other information suggesting that those households living in individual dwellings, which have meters and pay their own energy bills, use half of the energy of households in housing blocks that are not metered, and temperature is controlled by opening windows.

This example suggests the need for some large scale demonstration projects where meters and controls are installed in housing blocks and then monitored for savings. Specific recommendations for such demonstrations are described in **Section VI.**

III. Electricity and Thermal Tariffs

The Energy Pricing Workshop included several sessions which focused on tariff reform issues. These included the following:

- Tuesday, May 5, afternoon session attended by tariff experts from the Ministry of Energy focussing upon an examination of the detailed work papers on the Ministry's calculation of tariffs.
- Wednesday, May 6, all day session attended by majority of the Tariff Group focusing on formal presentation by Carlton Bartels and ensuing discussion.
- Thursday, May 7, discussion with tariff group on specific tariff issues involving Lithuanian thermal and electric tariffs.

The substantive issues raised in each of these sessions is described below.

A. Issues Regarding Current Tariff Development

In many ways the process of setting tariffs in Lithuania reflects the basic methodological framework typically utilized in the United States; i.e., the basic steps to cost-based tariff setting. However, while there are various deviations from "standard" U.S. practices, six stand out as being the most significant with regard to the actual impact they may have on the resulting tariffs.

Three of these can be classified as institutional issues, and three methodological (or technical) issues. The institutional issues are:

1. Lack of any entity overseeing all elements of tariff development.
2. Lack of a forum for expert debate.
3. Governmental decree of energy tariffs.

The three methodological issues are:

1. The classification of costs (i.e. allocation to billing components) is considered a technical issues (e.g. engineering concern), not an economic one.
2. Fuel costs at the Lithuania refinery are "cost", not market, based.
3. Currently used asset values (e.g. rate base) lack an analytical basis (historic expenditures or appraised value).

Each of these issues is discussed in turn below.

1. Institutional Issue 1: Lack of Consolidated Oversight

Perhaps one of the most problematic aspects of the institutional arrangements in which tariffs are currently developed in Lithuania is the continued focus by the analysts involved on narrow areas of expertise. The Lithuanian approach that emerges is piecemeal and lacks focus.

This appears to be symptomatic of the lack of an over-arching consideration of the manner in which tariffs are constructed in order to ensure that each step conforms with and promotes an overall policy. This appears to be a vestige of the Soviet manner of analysis which segmented the development of tariffs into discreet components. The output of one being the input to the next with little consideration as to the consistency of the two.

For example, in the discussion with the ministry technical analysts, it appeared that many decisions, which in the U.S. system would be considered issues of economic policy, were deemed to be engineering issues. (The specific importance of this distinction is discussed below, in **Technical Issue 1**.) The ministry's technical staff appeared to passively receive information from utility engineers that contained embedded decisions regarding the allocation of costs. In the U.S. system, these embedded allocations would have been examined to see if they comport with the overall tariff policy. In Lithuania, this information is treated as data, which the economists accept unquestioningly as input they consider to be outside of their realm of expertise and consideration.

2. Institutional Issue 2: Lack of Expert Debate

Tariffs are proposed by the Ministry of Energy based upon their analysis with considerable support and input from the utilities. The proposed tariffs are presented by a senior official of the ministry (i.e. the minister or deputy minister) to the cabinet for decision making. Neither the presenting official nor the cabinet members are necessarily familiar with the details of tariff development.

This system would be analogous to the U.S. system if the testimony of the expert witnesses were removed leaving only the testimony of the lead witnesses (i.e. the utility president or vice-president) who generally only relay the over-arching policy behind their tariff proposals. In the U.S. system, the technical experts present the majority of the evidence.

The lack of a forum for experts to provide input into the setting of tariffs greatly diminishes the focus on technical arguments, and thereby places greater emphasis on political goals.

It should be noted that any attempt to reform the system along market lines must recognize the status of technical expertise in Lithuania. As mentioned elsewhere in this section, there

is a lack of an over-arching understanding of the economics of tariff design and implementation, both on the part of the consumers and producers. The development of a forum for expert technical debate must be fed by a parallel development of a body of experts, and an understanding by the various entities of their stake in the debate. This latter point is particularly true regarding consumers, both industrial and residential.

3. Institutional Issue 3: Government Decree

While the cabinet chooses the tariffs, the current rate making process is setting the level of certain key tariffs at levels different than market-based prices. Most important among the tariffs are those for residential and agricultural consumers. Currently, these rates are established well below the calculated cost of service. Due to the rapid and severe rise in the costs of power, and the lagging rise in wages, this is an understandable and, possibly, essential policy.

While the policy is understandable, its implementation appears to be problematic. In our review of this process, which was admittedly limited, the cabinet and legislative actions seemed to lack a course of direction, and a game plan for how to phase out these subsidies. It seems that the level that tariffs can be raised is being determined in an ad hoc fashion.

The process of increasing tariffs must recognize the latest information available on the current ability, and attitude, of different consumer groups to pay; however, it would likely be of great help for all concerned if a general path was announced regarding the phase out of subsidies. Such a proposal need not be overly explicit, but should at a minimum indicate the length of the period subsidies would be placed out over, and the expected level (or range) of tariffs without subsidies.

This information would remove a great deal of uncertainty for the current situation. While showing the severity of the costs consumers will be facing, it will at least diminish the level of uncertainty, and the worry therein, of these cost rises everyone knows are coming, but do not know when. It would allow consumers to begin to adjust both their budgets and consumption patterns in anticipation of price increase rather than in reaction to them. Overall, announcement of price changes may help to bring some element of consumer understanding and stability to the situation, rather than detracting from it.

4. Technical Issue 1: Engineering Approach to Economic Issues

As mentioned earlier, many cost allocation issues that in the U.S. would be considered economic issues are treated as "technical" issues. For example, in Lithuania the allocation of power costs into energy and demand components is done by the utility engineers based upon the costs of supply (e.g. power plants). Power plants provide a dual product of energy (kWh) and capacity (kW). In the U.S., considerable debate occurs in cost allocation cases

regarding the appropriate manner to apportion costs between consumer demand and consumption charges.

While this debate in the U.S. respects the engineering economics of power production, they are not the sole consideration, as they are in the Lithuanian process. Instead, the U.S. debate recognizes that many allocation methods are justifiable based upon the cost structure of the power plant, but also realize the significance of considering the historic and future factors affecting the development of the power system. For example, if the system is suffering from excessive peak demand growth, more costs may be allocated to peak demand than consumption because that is seen as an element of the system where correct price signals are most important.

Because of the piecemeal methodology used to develop tariffs in Lithuania, the affect of the cost allocation on the system does not appear to be a consideration when the engineers allocate costs. Under the old system when power was essentially allocated to consumers, this cost allocation was unimportant. Instead, it appears the Lithuanian engineers follow a very simple allocation formula assigning all fixed costs to demand and variable costs to consumption (energy). This is an accounting approach to cost allocation, rather than an economic one.

A similar approach appears to be applied to the calculation of fuels produced by the Mazeihac refinery. The importance of this is discussed under **Technical Issue 2** below.

5. Technical Issue 2: Fuel Priced at Cost

Fuel prices from the Mazeikiac refinery are calculated on a cost-based approach. This allocation is in large part determined by the engineers at the refinery. Our review did not reveal the exact formula the refinery engineers used to allocate costs across the different petroleum products. It was explained that it was based upon the "technical" process.

The only acknowledgement of market forces appears to be in the allocation of the profit margin, which was done by the Ministry of Energy economists in a step subsequent to the "technical" cost allocation. In this final step, the targeted profit, or return on state capital, was spread to those products which were expected to be purchased without subsidization. Furthermore, crude oil purchases at the present time are based on the clearing principle under which trade arrangements are made for exchanges of goods valued in dollars, but no hard currency changes hands.

As a result, it could not be determined whether the cost of fuel charged to the electric and thermal production sectors bears a direct relationship to the world market price for similar products. Consequently, distortions in crude oil prices are reflected in the variable costs of power and thermal energy production at least partially, and explain why cost-based pricing results in tariffs well below international prices.

6. Technical Issue 3: Asset Valuation

The book value of assets in the power and thermal sectors are not meaningful measures of the value of the assets. The collapse of the ruble has forced this recognition in tariff setting, as the book costs of assets are exceedingly small. A simple adjustment for inflation across all accounts is unlikely to provide a useful estimate of value either given the allocation system that lead to the definition of these book costs.

In recognition that the book value of assets are grossly understated, new values are being attached to them while the old values are being increased five-fold. Our investigation did not reveal the agency(ies) which is(are) carrying out this reassessment, but it is evident from the lack of precision that a rather gross approximation is being applied (i.e., the Mazeikiac refinery assets are now assessed at 1 billion ruble, the Ignalina power plant at 3 billion ruble).

B. Findings

The Lithuanian process for establishing power and thermal tariffs attempts to be moored to the tenets of "cost-based" tariff design. Unfortunately, this is being done in a manner that may result in distortion in prices, which will require further adjustment in the future to be realigned to market forces.

There are two roots to this problem. First, many of the largest "costs" are not based on either a rational historic cost, nor a current market cost. This is true of both the fixed capital component of the power and thermal sectors, and of their fuel costs. Second, neither the power nor thermal systems are considered in a holistic manner when tariffs are being developed. The lack of specific goals and objectives offers the opportunity for each step in tariff development to be individually rational, but logically inconsistent with other steps.

As a result, consumer response will be influenced by distorted information. To date this is unlikely to have created major problems because energy price increases have been very large and in the direction of border prices and because of the consumer sector's limited ability to react to energy prices due to the lack of controls in the residential sector, and investment capital in the industrial sector. There is also the potential of price over shoot discussed earlier. However, if stability is to be gained, these problems should be dealt with early to prevent either institutionalizing problematic cost allocations.

Similarly, a sense of understanding on the part of consumers regarding the basis for and the implications of energy prices needs to be developed. Without this consumers will not be able to rationally respond to price changes, nor will they be able to provide meaningful input into the development of tariffs. Consumer feedback, particularly from potentially large users, into the development of tariffs can greatly enhance the efficient utilization of the present system.

C. Policy Issues Regarding Tariff Development

The tariff group spent considerable time discussing the theories behind tariff development, institutional options for tariff development, and specific problems facing Lithuanian power and thermal sectors. Much of the discussion revolved around the presentation regarding tariff setting practices in the United States. This presentation can be found in the large binders distributed at the work shop. Of particular interest, and discussion, was the time spent reviewing regulatory review processes. This discussion touched upon the nature and structure of regulatory commissions, and the mechanics of the adversarial process.

1. Cross Subsidization

Of the more specific topics discussed, the cross subsidization of thermal energy users was the most involved. In Lithuania, thermal energy is delivered to residential and industrial customers by a series of now separate quasi-independent systems. Historically, the cost of delivered thermal energy has been based upon the average costs of the total system nationwide, so individual users faced the same tariffs independent of the actual costs of delivering energy for the specific system they were on.

In the desire to move toward pricing that reflects true costs, the Lithuanian thermal utility managers are concerned about the role of cross subsidization across their separate systems. From the tone of the discussion, it appears that cross subsidization of thermal energy was losing the debate, and that each system was going to become individually financially responsible.

We observed that the economically efficient solution should recognize the distinctions in the operating costs, including future capital requirements, of the individual systems; however, we also noted that economic efficiency did not require that responsibility for sunk costs need not be allocated to any individual system. We noted that in the U.S., the consideration of fairness would allow the argument to be presented that sunk costs be pooled across the systems in a way that the total bill to individuals of similar usage would be comparable across Lithuania. This would be done by using a fixed customer charge as the averaging device to offset tail block consumption charges which accurately reflect the marginal costs of supply for each system.

This discussion revealed two significant factors in the way tariffs are considered. First, it showed an attitude that expects cost-based tariffs to be free of judgement; i.e. that they are deterministic. Second, it revealed a lack of differentiation between incremental costs and sunk costs. The nature of this difference and the role of each type of cost in setting tariffs was explained and discussed.

IV. Macroeconomic Structural Adjustment to Energy Price Reform

A macroeconomic working group was designated with four members. These members were Aleksandras Vasiliauskas (Professor and Head of the Analysis of Economics Systems Department, Vilnius University), Ovidijus Balsys (Assistant Professor of Economics, Vilnius University), Salomeja Girjotiene (Assistant Professor of Economics, Vilnius University), and Jack Huddleston (RMA). The primary purpose of this group is to design and review macroeconomic analysis pertaining to pricing reform in the Lithuanian energy sector. In broad terms, the purpose of the group is to develop analysis pertaining to two major areas: (1) effects of energy price reform on the economy, and (2) effects of economic restructuring on the energy sector.

A. Progress Review Meeting

The working group, along with three additional members of the Vilnius University economics faculty, three representatives from the Kaunas Energy Institute, and two members of the Ministry of Economy met for a progress review meeting on Tuesday, May 5. Three major topics were covered during the course of the May 5 meeting.

1. The context for macroeconomic issues and analysis was first overviewed. Five fundamental issues were identified:
 - a. Potential impacts of energy price changes on the Lithuanian economy.
 - b. Potential impacts of changes in the economy on the Lithuanian energy sector (e.g. economic structure, energy intensities, energy trade balances, etc.).
 - c. Potential relationships among fuels (e.g. implications of cross-elasticities among fuels).
 - d. Monetary considerations in financing anticipated energy sector developments, including energy conservation programs.
 - e. Equity and efficiency issues in allocating scarce energy resources (such as petroleum products and natural gas).
2. Faculty from Vilnius University presented their "preliminary" analysis of new fuel (oil and gas) prices on overall prices, including energy. This analysis was conducted using the 1987 input-output (IO) model (30 branches) and fuel prices for three different

periods (1/1/91-2/1/92; 2/1/92-4/1/92; and "expected" prices for 5/2/92). The analysis took into account the use of fuels to produce energy resources (e.g. oil to produce electricity) and the use of energy to produce goods (e.g. electricity to produce cement products). **The analysis assumed that overall production levels in Lithuania remained constant and that only energy and product prices would change (i.e. perfectly inelastic demand for energy and goods in the Lithuanian economy).**

The results of the preliminary analysis, reported in "nominal" rubles, are contained in **Appendix F**. Although of limited value because of the elasticity assumption and the use of nominal rubles, the estimated fuel price-induced output price changes are extremely large. Selected price increases are shown below. The price increase for each period is stated in reference to prices existing in January 1, 1991 (e.g. 2.0 means that prices have doubled since 1/1/91).

Table 3. Changes in Output Prices Caused by Fuel Price Increases

| | | 2/1/92 | 4/1/92 | "Expected" |
|-----|-----------------------------|--------|--------|------------|
| 001 | electricity and heat | 19.00 | 28.59 | 48.66 |
| 002 | oil products | 38.57 | 56.46 | 119.00 |
| 003 | oil refinery products | 35.78 | 74.30 | 113.45 |
| 004 | gas products | 68.50 | 72.38 | 162.41 |
| 005 | coal | 43.20 | 46.77 | 51.41 |
| 006 | peat | 13.41 | 16.91 | 21.42 |
| 008 | main chemical products | 17.22 | 20.94 | 41.20 |
| 009 | synthetic mat. and plastics | 15.19 | 18.62 | 36.28 |
| 015 | cement and asb. products | 11.21 | 19.16 | 29.32 |
| 019 | light industry products | 2.39 | 3.06 | 4.58 |
| 028 | communication | 2.48 | 3.41 | 4.77 |
| 029 | circulation | 2.13 | 2.73 | 3.80 |

3. Vilnius University faculty had also prepared background information on national social accounts and related energy data. Although this information often pertains to pre-independence years and centralized pricing and planning, it does provide valuable information on changes that have been occurring throughout the economy. This information is reported in **Appendices G-N** and is briefly described or identified below.

B. Analysis Meeting

The working group met again on Thursday, May 7 to develop a common understanding of the various economic models available and to develop specific plans for future energy-related analysis.

Vilnius University faculty overviewed the current input-output IO model and discussed typical analytical uses of the model. The model is based on 1987 data and is aggregated to 30 economic sectors (branches). The model is similar in structure to that used in Czechoslovakia (and other Eastern European economies). A copy of the transaction table for the 30 sector model is reported as **Appendix O**.

As a general statement, Lithuanian economists are primarily interested in using the IO model for "tracking" the effects of energy price changes on the prices of other goods and services (i.e. the model is primarily used as an accounting tool). Increased prices are tracked through the various direct and indirect uses of various goods and services. **Unlike uses of IO in the U.S. and Western European countries, the final demand sector (i.e. the set of final products purchased in the economy or exported) is very seldom (if ever) changed. The model is also seldom used for partial analysis.**

As an illustration of how to conduct partial economic analysis, the working group used the 30 sector IO model to analyze the impact of a one ruble increase in electricity tariffs on costs of all goods and services. The output of this analysis is shown in **Appendix P**. This analysis was used to discuss energy (electricity) sensitive industries and to discuss likely impacts of production cost increases on demand for final goods.

The working group next overviewed the RMA Industrial Energy Model. Major features of the model were discussed, including energy price elasticities, product price elasticities and underlying assumptions and data requirements. The IO and RMA models were compared for similarities and differences. The IO model is useful, in particular, for evaluating direct and indirect effect on prices. The RMA model is particularly useful in looking at price impacts on final demand and related economic structure.

The final task of the Thursday session was discussion of analysis to be conducted in anticipation of subsequent meetings of the larger working group. **Section C** is a summary of the guidelines agreed to by the macroeconomic working group.

C. Macroeconomic Analysis

1. The macroeconomic working group is to analyze two basic questions:
 - A. How will the Lithuanian economy change in response to energy price changes by the year 2000?
 - (1) Changes in the overall level of production?
 - (2) Changes in the composition of production? Which branches will grow; which will decrease?
 - B. How much energy, by energy resource, will be required for the new market-based economic structure? What barriers and opportunities will be encountered due to the new economic structure? What will be the net energy trade balance associated with the new economic structure?
2. Vilnius University economics faculty (VUEF) will have primary responsibility for conducting the macroeconomic analysis. This research will be facilitated through a contract for services with RMA. The analysis will utilize the IO and RMA models.
3. VUEF will coordinate their analysis with Ms. Ada Macezinskiene. The Ministry of Energy will provide facilities for the computer provided by USAID and economic models.
4. In conducting research related to the two basic questions, VUEF will need to develop three prerequisite data series:
 - A. Forecasts of industrial output to the year 2000, independent of energy price changes (i.e. industrial output forecasts or scenarios assuming energy prices remain at the May 2, 1992 levels. All assumptions and methods are to be documented in the final report.
 - B. Estimates of producer price indexes for the period 1990-1992. These estimates are to be used to adjust 1990-1992 nominal data to real (1990) terms.
 - C. Forecasts or scenarios of real energy prices to the year 2000. All assumptions and methods are to be documented in the final report.
5. A draft written report is to be prepared by VUEF for use at the next meeting of the working group with RMA team members. This report is to discuss results of the primary analysis, implications for energy pricing and planning in Lithuania, and all

assumptions and methods used in conduct of the study. RMA will provide an example of macroeconomic analysis conducted in Romania or Czechoslovakia. The report can be written in Lithuanian, with RMA assuming responsibility for translation to English.

V. Establishment of Lithuanian Energy Balances

The reconnaissance trip of the Energy Price Reform Project identified various problems in the Lithuanian data on energy use. A recommendation of that trip as noted in the trip report (March 1992), was to have Lithuanian experts review their data as collected under the former USSR and attempt to rectify inconsistencies in values and definitions. The overall goal of this effort is to provide a consistent set of data from which the GOL could plan and manage its energy system. Such a data base is essential regardless of the status of market reform.

Under subcontract to RMA, the Lithuanian Energy Institute has undertaken the task and presented their preliminary results at the workshop. An extensive review of these results took place. The preliminary results were well prepared and encouraging in regards to the prospects of establishing a set of energy balances that will be commonly accepted and serve the needs of the GOL. The RMA team provided feedback and recommendations for some final changes, particularly relating to the definition of end-use energy versus primary or resource energy use. Other feedback was provided in regards to the treatment of energy losses relating to the export of electricity and the energy consumption in the transit of natural gas.

The work on the energy balances is planned for completion in July 1992 and the final tables will be provided at that time.

VI. Recommendations

The fundamental energy issues described in the Energy Price Reform Reconnaissance Trip Report (March 1992) remain. Progress has been made in further adjusting energy prices and in developing an understanding for the basis for the price adjustments. Further work remains to be done as described in this report, with the overall goal of using market forces and appropriate GOL management to improve energy efficiency and thereby reduce the differential between the value of energy imports and energy exports.

The recommendations that follow are divided into two categories. The first category of recommendations are for specific actions for the remainder of this project. The second category of recommendations is broader, covering policy decisions and projects for the GOL and international donors and lenders.

A. Project Recommendations

1. Complete the energy balance tables. This work is being completed under subcontract with the Lithuanian Energy Institute and the assistance of RMA.
2. Continue tariff design work for electricity and thermal tariffs, including improved analysis of costs and consideration of the potential for marginal cost based tariffs. This work is being continued under subcontract with the Lithuanian Energy Institute and in coordination with the Ministry of Energy and the Lithuanian Power Board.

These tariffs are to be reviewed and discussed by the working group during the July trip, prior to the Baltic regional price reform meeting on July 16 and 17.

3. Complete a study of the macroeconomic impacts of energy price reform on the structure of the Lithuanian economy, on the level of production, on the energy requirements for the economy, and on the energy trade balance. This work is being continued under subcontract with a private firm established by University of Vilnius faculty.

The draft results of this study will be reviewed and discussed during the July trip, prior to the Baltic regional price reform meeting.

4. Collaborate with the working group in preparation for the Baltic regional price reform meeting. A key topic to explore with the working group are the advantages and disadvantages of regional cooperation and agreements on energy prices, operations, and investments in the region.

RMA will develop a paper on this subject for review and discussion at the July meeting and for presentation at the Baltic regional meeting.

5. RMA and Lithuanian working group joint participation in the Baltic regional meeting on energy price reform.

B. Broader Recommendations

The results of the project to date, including the extensive discussions with Ministry of Energy officials and the working group, lead to the following recommendations:

1. Tariff design support. Considerable progress is being made on the basis for market tariffs and on the existing cost information available in Lithuania. A next step would be to provide four person-months of effort to support the visit of a tariff design expert to work with Ministry of Energy, Power Board, and Lithuanian Energy Institute staff in tariff design. Such an effort should be divided into two, one month trips dedicated solely to tariff design.

The goal of such a trip would be to develop a set of electric, thermal, and natural gas tariffs for consideration by the Ministry of Energy. The intent of such a trip is both further training the development of a set of tariffs.

2. District Heating Metering and Controls. The workshop spent considerable time in discussing the problem with district heating tariffs in regards to the lack of metering and controls. It also discussed existing Lithuanian estimates of the investment requirements and energy cost savings that would occur if meters and controls were put in place along with new tariffs. (Mr. Romas Stonys, Head of Department, State System of Energetics provided this information). The estimates presented showed a payback of less than one year.

The recommendation is that a loan and technical assistance program be established to support the retrofitting of three housing blocks, one commercial facility and one industrial facility with meters and controls. The equipment would be funded with a five year loan. Such a length of loan would provide for the possibility of positive cash flow for projects with a payback of five years or less.

The equipment would be purchased and installed on a competitive basis with installation provided by private Lithuanian firms. If USAID funds were to support such a program, U.S. equipment would be specified for bidding. Because of the demonstration nature of the project, technical assistance would be provided to conduct the design work in conjunction with Lithuanian utilities and private firms, and to assist in construction management and start-up. The technical assistance

would also work with a Lithuanian firm to monitor and evaluate the results for dissemination.

Alternate funding sources include the World Bank and European Investment Bank. In this event, USAID could still provide the technical assistance component.

The advantages of this demonstration project is that it would provide an example of the types of modern technology in different settings that could be replicated hundreds of times throughout Lithuania and the NIS. It would also demonstrate the role of tariffs and private energy service firms in achieving energy efficiency. This transformation must take place if efficiency is to be achieved in this sector and it offers the opportunity for U.S. technology to get in on the ground floor.

3. Technical Advisor Assistance. Lithuania faces at least two more years of economic turmoil as prices and the overall economy continue to adjust to the new conditions, including the implementation of national currencies. It is our observation that an on-call technical advisor(s) would be quite useful to help the Ministry of Energy and other GOL Ministries with a wide variety of question in energy price reform and efficiency.

Among the foremost issues are the adoption of regulatory reform, the implementation of least-cost planning, the promotion of private energy service firms, the development of Baltic regional energy agreements, and major energy system investments. Concerning the latter point, the investment decisions in regards to the Ignalina (Should the first unit be decommissioned and should construction on the third unit restarted?) and the new pumped storage facility (Should it be run with the existing operational units or should it be completed to the full 1600MW capacity?) are very important.

These recommendations are in addition to those emanating from the Industrial Energy Efficiency Project.

Appendix A
Summary of Meetings

Date: April 29, 1992

Place: Ministry of Energy

Attending: Mark Hanson, Carlton Bartels

Ms. Ada Macezinskiene
Director, Economics Department
Ministry of Energy

Kazys Zilyis
Department Director
Ministry of Energy

Saulius Kutas
Advisor to the Minister
Ministry of Energy

1. The meeting began with review of events and politics since that last trip by the RMA team.
2. Ada Macezinskiene provided a revised schedule (Appendix B) for the workshop based on the RMA suggestions and discussions with the working group. She also provided a list of intended workshop participants and recommended groupings. Agreement was made on the revised schedule after a few further changes.
3. Arrangements were made for setting up the desk top computer provided by USAID in the Ministry of Energy Offices. It was agreed (see letter on this subject to Ms. Macezinskiene) that this location was temporary, subject to USAID final decisions, and that the computer would be made available at this location to member of the working group.

(Second Meeting)

Place: U.S. Embassy

Attending: Hanson, Bartels

Scott Lansell
Acting Rep
USAID

Edmundas Kackus
Program Assistant
USAID

1. The status of the Energy Price Reform Project was discussed as well as plans for the workshop. Workshop notebooks were reviewed and copies of the schedule and list of participants were left for USAID use. An invitation was extended to participate in as much of the workshop as desired.
2. A review of the energy situation and current energy prices was provided. General discussions followed.

Date: April 30, 1992

Place: Ministry of Energy

Attending: Hanson, Bartels, and Huddleston

Macezinskiene, Zilys, and other Ministry staff

1. The RMA team brought the desk top computer to the Ministry and set it up. After set up, the RMA industrial and transportation models were run to check the operation of the computers and software.
2. In the afternoon, the workshop commenced, see the schedule in Appendix B.

Date: May 1, 1992

Place: Lithuanian Energy Institute (LEI) at Kaunas

Attending: Hanson, Bartels, and Huddleston

Dr. Jurgis Vilemas
Director
LEI

Dr. Vidmantas Jankauskas and other LEI staff
participating in the Workshop (Appendix C)

1. A discussion of energy conditions and LEI activities was held. It was apparent from the meeting that the importance of the small economic group at LEI had increased considerably, while the rest of LEI was contracting.
2. A set of all day technical meetings ensued, see schedule in Appendix B.

Date: May 2, 1992

Place: Hotel in Kaunas

Attending: Hanson and Jankauskas

1. A meeting was held to discuss the subcontract with LEI. Terms were agreed to and Hanson agreed to write contract while in Lithuania.
2. Hanson agreed to review draft paper by Jankauskas on Lithuanian energy options and strategies. Reviewed paper was returned on May 6.

Date: May 3, 1992

Place: Kasiadorys Pumped Storage Project Site

Attending: Hanson, Bartels, and Huddleston

Dr. Vaclovas Miskinis
LEI

1. A tour of the pumped hydro site was made to review status of construction and environmental impact issues.

Date: May 4, 5, and 6, 1992

Place: Ministry of Energy

Attending: RMA Team and Workshop Attendees

1. Workshop continued, see Appendix B.
2. Workshop session was visited by Lithuanian Television. Ms. Aurelija Malakauskaite interviewed Hanson. The taping appeared on the evening news.

Date: May 7, 1992

Place: Ministry of Energy

Attending: RMA Team and Workshop Attendees

Edmundas Kackus, US Embassy

23

1. Workshop progress was reviewed and plans set for the period up to the next trip. Other discussion points were the two upcoming meetings being organized by RCG/Hagler Bailly in May and July. The working group agreed to participate in those meetings and to a trip by RMA just prior to the second meeting. Work during the interim, including that by the two subcontractors was also discussed.
2. Mr. Kackus was brought up to date on the activities of the workshop. Scott Lansell was out of the country.

Date: May 8, 1992

Place: Ministry of Energy

Attending: Hanson, Bartels, and Huddleston

Macezinskiene, Zily

Dr. Leonas Asmantas
Minister
Ministry of Energy

Dr. Antanas Ivanauskas
First Deputy Minister
Ministry of Finance

Mr. Feliksas Ksanas
Advisor to Parliament

Mrs. Filomena Yasevichene
Deputy Minister
Ministry of Economics

1. This meeting was held to present the results of the workshop to the highest policymaking level possible. Macezinskiene and Zily were quite pleased by the response of the Minister and deputy ministers from finance and economics to the executive summary. Particular emphasis was given to the pricing issues raised in the workshop and the need for investments in meters and controls to complement energy price reform.
2. The Minister and Prime Minister had been in a public confrontation during the workshop, with the Prime Minister demanding a resignation. The Prime Minister had to back down.

Appendix B
Workshop Schedule

Darbinių grupių darbo planas
30 balandžio - 7 gegužės 1992 m.

Workshop Schedule
30 April - 7 May, 1992

Dalyvauja JAV resursų taupymo asociacija ir Lietuvos energetikos ministerijos koordinuojama darbinė grupė

Resource Management Association, USA and Workgroup coordinated by Ministry of Energy, Lithuania

| Darbiniai susitikimai data | val. | Svarstomas klausimas | Dalyvauja | Susitikimo vieta |
|-------------------------------|-------|--|----------------------------|--|
| Workshop Meetings Date | Time | Topics | Participants | Place |
| 30 balandžio | 14.00 | Įvadas apie Seminaro te- matiką | Visos darbinės grupės | Energetikos minis- terija III a. posė- džių salė |
| 30 April | 14.00 | Introduction of Workshop Topics | All worksgoups | Ministry of Energy, 3rd floor, Assembly Hall |
| | 15.00 | Pasikeitimai Lietuvos ener- getikos ekono- minėje bei ap- linkosaugos būk- lėje | | |
| | 15.00 | Recent Developments in Lithuanian Energy and Environment Situation | | |
| | 16.00 | Energijos balanso įvertinimas | | |
| | 16.00 | Lithuanian Energy Balance Evaluation | | |
| 1 gegužės | 10.00 | Energijos balanso įvertinimas, disku- sijos šiuo klausimu | Energijos balansų grupė | VFEPJ Kaunas |
| 1 May | 10.00 | Discussion on Energy | Energy Balance | Energy Rese- arch Institute, Kaunas |
| | 18.00 | Energy Balance Evalu- ation | group | |

| Darbiniai susitikimai data | val. | Svarstomas klausimas | Dalyvauja | Susitikimo vieta |
|-------------------------------|----------------|---|-----------------------------|---|
| 4 gegužės | 11.00 13.00 | Taupusis planavimas | Visa darbinė grupė ir kt. | Energetikos m-ja II aukštas salė |
| 4 May | 11.00 13.00 | Least-Cost Planning | Whole group and some quests | Ministry of Energy, 2nd floor, Hall |
| | 13.00-14.00 | Pertrauka | | |
| | 13.00-14.00 | Lunch break | | |
| | 16.00-17.00 | Diskusijos taupaus planavimo klausimais | " | |
| | | Discussion on Least-Cost Planning Issues | " | |
| 5 gegužės | 9.00 16.00 | Energetinės ekonominės sistemos analizė | Ekonominės analizės grupė | Vilniaus Universitetas, Saulėtekio Nr. 9 Ekon.fak |
| 5 May | 9.00 16.00 | Analysis of Economic Developments (Energy Issues) | Economic analysis group | Vilnius University, Faculty of Economics, 9 Saulėtekio str. |
| 6 gegužės | 10.00 16.00 | Elektros ir šilumos tarifai | Tarifų grupė | Energetikos m-ja III a. posėdžių salė |
| | 10.00 16.00 | Electricity and Thermal Tariffs | Tariff group | Ministry of Energy 3 rd floor, Assembly Hall. |
| | | Dujų ir naftos tranzito mokesčiai | | |
| | | Gas and Oil Transit Fees | | |
| 7 gegužės | 10.00 13.00 | Elektros Energijos tarifų aptarimas | Tarifų grupė | Energetikos ministerija III aukštas posėdžių salė |
| 7 May | 10.00 13.00 | Discussion on Electricity Tariffs | Tariff group | Ministry of Energy, 3rd floor, Assembly Hall |
| | 14.00 | Šilumos tarifų aptarimas | " | |
| | 17.00 | | | |
| | 14.00 17.00 | Discussion on Thermal Tariffs | " | |

| | | | | |
|-----------|-------|-----------------------------|--------------------|-----------------------|
| 8 gegužēs | 12.00 | Baigiamasis darbo etapas | Energetikos m-ja | Energetikos m-ja |
| 8 May | 12.00 | Final Meeting | Ministry of Energy | Ministry of Energy |

Appendix C
Workshop Attendees and Subgroups

LIETUVOS RESPUBLIKOS
DARBINĖS GRUPĖS ENERGETIKOS
EKONOMIKOS KLAUSIM AIS

S A R A Š A S

(pagal darbo grupes)

LIST OF WORKING GROUP
FOR ENERGY ECONOMICS ISSUES

Energijos balansų grupė

Energy Balance Group

1. Antanas Juška
- Energetikos ministerijos Elektros ir šilumos departamento direktorius
Ministry of Energy, Director of Power Department
2. Vaclovas Miškinis
- Kauno Energetikos instituto vyr. mokslinis bendradarbis
Kaunas Energy Institute, Scientist
3. Valentinas Klevas
4. Rimantas Šukys
- Ekonomikos ministerijos skyriaus viršininko pavaduotojas
Ministry of Economy, Deputy Chief

Gamtosaugos grupė

Environmental Protection Group

1. Juozas Liaukonis
- Energetikos ministerijos Ekologijos skyriaus viršininkas
Ministry of Energy, Head of Ecology Sector

- | | |
|----------------------|---|
| 2. Vytautas Gūžys | - Energetikos ministerijos Ekologijos skyriaus darbuotojas Ministry of Energy, Ecology Sector Specialist |
| 3. Rimvydas Andrikis | - Aplinkos apsaugos departamento Ekonomikos valdybos viršininkas Department of Environmental Protection, Head of the Economics Board |
| 4. Pranas Liuga | - Aplinkos apsaugos departamento Atmosferos valdybos vyr. specialistas Department of Environmental Protection, Senior Specialist |
| 5. Daiva Semėnienė | - Aplinkos apsaugos departamento patarėja ekonomikai Department of Environmental Protection, Economic Advisor |

Tarifų grupė

Tariff Group

- | | |
|----------------------------|--|
| 1. Rimas Lukoševičius | - Ekonomikos ministerijos Kainų departamento direktoriaus pavaduotojas Ministry of Economy, Deputy Director of Pricing Department |
| 2. Kristina Grigalevičiūtė | - Finansų ministerijos skyriaus viršininko pavaduotoja Ministry of Finance, Deputy Chief |
| 3. Mindaugas Krakauskas | - Kauno Energetikos instituto mokslinis bendradarbis Kaunas Energy Institute, Research Assistant |
| 4. Arvydas Galinis | - Kauno Energetikos instituto vyr. mokslinis bendradarbis Kaunas Energy Institute, Scientist |
| 5. Gediminas Volskis | - Valstybinės Energetikos sistemos Ekonomikos skyriaus viršininkas State Energy System, Chief of Economics |
| 6. Romas Stonys | - Valstybinės Energetikos sistemos Termofikacijos tarnybos viršininkas State Energy System, Chief of Thermofication Division |

- | | |
|------------------------|--|
| 7. Žaneta Drobnytė | - Valstybinės įmonės "Lietuvos dujos" direktorė ekonomikai State Owned Utility "Lietuvos dujos" Director of Economics |
| 8. Stasys Matusevičius | - Valstybinės įmonės "Lietuvos kuras" direktorius ekonomikai State Owned Enterprise "Lietuvos kuras", Director of Economics |
| 9. Dana Junelienė | - Energetikos ministerijos Ekonomikos departamento vyr. ekonomistė Ministry of Energy, Senior Economist |
| 10. Vita Samsonienė | - Energetikos ministerijos Ekonomikos departamento vadovė ekonomistė Ministry of Energy, Economist |

Ekonominės analizės grupė

Economic Analysis Group

- | | |
|-----------------------------|--|
| 1. Aleksandras Vasiliauskas | - Vilniaus Universiteto profesorius, Ekonominės sistemos analizės katedros vedėjas Vilnius University Professor, Head of Analysis of Economics Systems Department |
| 2. Ovidijus Balsys | - Vilniaus Universiteto docentas Vilnius University, Assistant Professor |
| 3. Salomėja Girjotienė | - Vilniaus Universiteto docentė Vilnius University, Assistant Professor |

Darbinės grupės koordinatoriai

Coordinators of Working Group

Ada Macežinskienė ir Kazys Žilys

Appendix D
European Energy Charter

EUROPEAN ENERGY CHARTER

The representatives of the signatories, meeting in The Hague on 16 and 17 December 1991;

Having regard to the Charter of Paris for a New Europe, signed in Paris on 21 November 1990 at the summit meeting of the Conference on Security and Co-operation in Europe (CSCE);

Having regard to the document adopted in Bonn on 11 April 1990 by the CSCE Conference on Economic Co-operation in Europe;

Having regard to the declaration of the London Economic Summit adopted on 17 July 1991;

Having regard to the report on the conclusions and recommendations of the CSCE meeting in Sofia on 3 November 1989, on the protection of the environment, as well as its follow-up;

Having regard to the Agreement establishing the European Bank for Reconstruction and Development signed in Paris on 29 May 1990;

Anxious to give formal expression to this new desire for a European-wide and global co-operation based on mutual respect and confidence;

Convinced of the essential importance of efficient energy systems in the production, conversion, transport, distribution and use of energy for security of supply and for the protection of the environment;

Recognizing State sovereignty and sovereign rights over energy resources;

Assured of support from the European Community, particularly through completion of its internal energy market;

Aware of the obligations under major relevant multilateral agreements, of the wide range of international energy co-operation, and of the extensive activities by existing international organizations in the energy field and willing to take full advantage of the expertise of these organizations in furthering the objectives of the Charter;

Recognizing the role of entrepreneurs, operating within a transparent and equitable legal framework, in promoting co-operation under the Charter;

Determined to establish closer, mutually beneficial commercial relations and promote energy investments;

Convinced of the importance of promoting free movement of energy products and of developing an efficient international energy infrastructure in order to facilitate the development of market-based trade in energy;

Aware of the need to promote technological co-operation among signatories;

1. Development of trade in energy, consistent with major relevant multilateral agreements such as GATT, its related instruments, and nuclear non-proliferation obligations and undertakings, which will be achieved by means of:
 - an open and competitive market for energy products, materials, equipment and services;
 - access to energy resources, and exploration and development thereof on a commercial basis;
 - access to local and international markets;
 - removal of technical, administrative and other barriers to trade in energy and associated equipment, technologies and energy-related services;
 - modernization, renewal and rationalization by industry of services and installations for the production, conversion, transport, distribution and use of energy;
 - promoting the development and interconnection of energy transport infrastructure;
 - promoting best possible access to capital, particularly through appropriate existing financial institutions;
 - facilitating access to transport infrastructure, for international transit purposes in accordance with the objectives of the Charter expressed in the first paragraph of this Title;
 - access on commercial terms to technologies for the exploration, development and use of energy resources.

(ii) use of new and renewable energies and clean technologies;

- achieving and maintaining a high level of nuclear safety and ensuring effective co-operation in this field.

TITLE II: IMPLEMENTATION

In order to attain the objectives set out above, the signatories will, within the framework of state sovereignty and sovereign rights over energy resources, take co-ordinated action to achieve greater coherence of energy policies, which should be based on the principle of non-discrimination and on market-oriented price formation, taking due account of environmental concerns.

They underline that practical steps to define energy policies are necessary in order to intensify co-operation in this sector and further stress the importance of regular exchanges of views on action taken, taking full advantage of the experience of existing international organizations and institutions in this field.

The signatories recognize that commercial forms of co-operation may need to be complemented by intergovernmental co-operation, particularly in the area of energy policy formulation and analysis as well as in areas which are essential and not suitable to private capital funding.

They undertake to pursue the objectives of creating a broader European energy market and enhancing the efficient functioning of the global energy market by joint or co-ordinated action under the Charter in the following fields:

- access to and development of energy resources;
- access to markets;

To this end, they will ensure that rules on the exploration, development and acquisition of resources are publicly available and transparent; they recognize the need to formulate such rules wherever this has not yet been done and to take all necessary measures to co-ordinate their actions in this area.

With a view to facilitating the development and diversification of resources, the signatories undertake to avoid imposing discriminatory rules on operators, notably rules governing the ownership of resources, internal operation of companies and taxation.

2. Access to Markets

The signatories will strongly promote access to local and international markets for energy products for the implementation of the objectives of the Charter. Such access to markets should take account of the need to facilitate the operation of market forces, and promote competition.

3. Liberalisation of trade in energy

In order to develop and diversify trade in energy, the signatories undertake progressively to remove the barriers to such trade with each other in energy products, equipment and services in a manner consistent with the provisions of GATT, its related instruments, and nuclear non-proliferation obligations and undertakings.

5. Safety principles and guidelines

Consistent with relevant major multilateral agreements, the signatories will:

- Implement safety principles and guidelines, designed to achieve and/or maintain high levels of safety, in particular nuclear safety and the protection of health and the environment;
- develop such common safety principles and guidelines as are appropriate and/or agree to the mutual recognition of their safety principles and guidelines.

6. Research, technological development, innovation and dissemination

The signatories undertake to promote exchanges of technology and co-operation on their technological development and innovation activities in the fields of energy production, conversion, transport, distribution and the efficient and clean use of energy, in a manner consistent with nuclear non-proliferation obligations and undertakings.

To this end, they will encourage co-operative efforts on:

- research and development activities;
- pilot or demonstration projects;
- the application of technological innovations;
- the dissemination and exchange of know-how and information on technologies.

- occupational trainings;

- public information in the energy efficiency field.

TITLE III: SPECIFIC AGREEMENTS

The signatories undertake to pursue the objectives and principles of the Charter and implement and broaden their co-operation as soon as possible by negotiating in good faith a Basic Agreement and Protocols.

Areas of co-operation could include:

- horizontal and organisational issues;
- energy efficiency, including environmental protection;
- prospecting, production, transportation and use of oil and oil products and modernization of refineries;
- prospecting, production and use of natural gas, interconnection of gas networks and transmission via high-pressure gas pipelines;
- all aspects of the nuclear fuel cycle including improvements in safety in that sector;
- modernization of power stations, interconnection of power networks and transmission of electricity via high-voltage power lines;
- all aspects of the coal cycle, including clean coal technologies;
- development of renewable energy sources;

Appendix E
Bibliography

BIBLIOGRAPHY

- American Gas Association, Gas Rate Fundamentals, American Gas Association, Arlington, 1978.
- American Gas Association, Introduction to Public Utility Accounting, American Gas Association, Arlington, 1984.
- Bernow, Steven, Bruce Biewald, and Donald Marron, "Full-Cost Dispatch: Incorporating Environmental Externalities in Electricity System Operations", The Electricity Journal, pp. 20-33, March 1991.
- Bernow, Steven and Donald Marron, "Valuation of Environmental Externalities for Energy Planning and Operations", Tellus Institute, Boston, 1990.
- Bodlund, Birgit, Evan Mills, Tomas Karlsson, and Thomas Johansson, "The Challenge of Choices: Technology Options for the Swedish Electricity Sector", in Electricity: Efficient End-Use and New Generation Technologies, and Their Planning Implications, Lund University Press, Lund, 1990.
- Breyer, Stephen, Regulation and Its Reform, Harvard University Press, 1982.
- Council on Environmental Quality, "Preparation of Environmental Impact Statements: Guidelines and Regulations", The Federal Register, Washington, D.C., vol 38 (147), Part II, August 1, 1973.
- Cramer, Curtis, "Natural Gas Pipelines and Monopoly", in Public Utility Regulation, Kenneth Nowotny, David Smith, and Harry Trebing, eds., Kluwer Academic Publishers, Boston, 1989.
- Electric Utility Rate Design Study, Reference Manual and Procedures for Implementing PURPA, Report #82, Palo Alto, 1979.
- Electric Utility Rate Design Study, Electric Utility Costing and Ratemaking: Methods and Procedures, Costs and Rates Workbook, #93A, prepared for Electric Utility Rate Design Study by ICF Inc., Washington, 1981.
- Federal Energy Regulatory Commission, "Federal Energy Regulatory Commission", Washington, D.C., 1985.
- Gjelsvik, Eystein and Oystein Olsen, "Introduction of the Common Carrier Principle in the European Gas Market: Possible Effects on Costs, Monopoly Rents and Consumption", in Energy Supply in the 1990s and Beyond, Proceedings of the International Association for Energy Economics, June 26-28, 1989, Caracas.

Hanson, Mark, Stephen Kidwell, Dennis Ray, and Rodney Stevenson, "Electric Utility Least-Cost Planning: Making It Work within a Multiattribute Decision-Making Framework", Journal of the American Planning Association, vol. 57, no. 1, 1991.

Hopper, Ronald, Jesper Munkegaard, and Uffe Bungaard-Jorgensen, "Integration of the Natural Gas Markets in Western Europe", in Energy Supply in the 1990s and Beyond, Proceedings of the International Association for Energy Economics, June 26-28, 1989, Caracas.

Hughes, William, "Groping Toward Competition: The U.S. Electricity Generating Industry", in Energy Supply in the 1990s and Beyond, Proceedings of the International Association for Energy Economics, June 26-28, 1989, Caracas.

Iliff, David, "The Externality Issue in Advance Plan 6", Public Service Commission of Wisconsin, Advance Plan 6 Information, State of Wisconsin, Madison, 1991.

International Energy Agency, Natural Gas Prospects and Policies, Organization for Economic Cooperation and Development, Paris, 1991.

Jestin-Fleury, Nicole, "Impact of the Unified European Market on Oil Supply: Comparative Analysis for France, West Germany, Italy and Spain", in Energy Supply in the 1990s and Beyond, Proceedings of the International Association for Energy Economics, June 26-28, 1989, Caracas.

Kay, Timothy, "Developments in the Incorporation of Environmental Externalities in Electric Utility Planning", Public Service Commission of Wisconsin, Advance Plan 6 Information, State of Wisconsin, Madison, 1991.

Lagerroos, Dorothy, Your Role in the Act: A Citizens Guide to WEPA, Office of State Planning and Energy, State of Wisconsin, Madison, 1977.

Lebel, Philip, Energy, Economics, and Technology, Johns Hopkins Press, Baltimore, 1982.

Penn, David and Rodney Stevenson, "For Competitions Sake - Transmission Access First", in Competition in Electricity: New Markets and Structures, J. Plummer and S. Troppmann, eds., Public Utilities Reports, Arlington, 1990.

Phillips, Charles, The Regulation of Public Utilities: Theory and Practice, Public Utilities Reports, Arlington, 1988.

Public Service Commission of Wisconsin, Advance Plan 6, State of Wisconsin, Madison, 1991.

Public Service Commission of Wisconsin, "Staff Assessment of Electric Utility Plans", Advance Plan 6 Information, State of Wisconsin, Madison, 1991.

45

- Public Service Commission of Wisconsin, "Public Service Commission At a Glance", State of Wisconsin, Madison, 1991.
- Public Service Commission of Wisconsin, Wisconsin Administrative Codes, Chapters PSC 111,113,116,136, Wisconsin Register, 1991.
- Public Service Commission of Wisconsin, "Staff Issue Paper: Demand Side", Advance Plan 6 Information, State of Wisconsin, Madison, 1991.
- Shepherd, William, Public Policies Toward Business, Richard D. Irwin, Homewood, IL, 1985.
- Stalon, Charles, "Tasks Remaining in the Natural Gas Industry with Emphasis on Gas Inventory Charges", presented at Pricing Electric, Gas and Telecommunication Services: Regulation of public Utilities in the 1990s, Kansas City, 1990.
- Stern, Jonathan P., European Gas Markets: Challenge and Opportunity in the 1990's, Dartmouth Publishing Company, Brookfield, 1990.
- Tietenberg, Tom, Environmental and Natural Resource Economics, HarperCollins Publishers, New York, 1992.
- Trebing, Harry, "Public Utility Regulation: A Case Study in the Debate over Effectiveness of Economic Regulation", Journal of Economic Issues, pp. 223-250, vol. XVIII no. 1, 1984.
- United States Congress, "The National Environmental Policy Act of 1969", United States Code, 42 USC 4301.
- United States Congress, "Interstate Transportation of Petroleum Products", United States Code, Title 15, Chapter 46.
- United States Congress, "The Natural Gas Act", United States Code, Title 15, Chapter 15B.
- United States Congress, "National Energy Conservation Policy Act", United States Code, 42 USC 8201.
- United States Congress, "The Natural Policy Gas Act", United States Code, Title 15, Chapter 60.
- United States Congress, "Public Utility Regulatory Policies Act of 1978", United States Code, Federal Energy Guidelines.
- Wisconsin State Legislature, Wisconsin Legislative Code, Chapter 196, Regulation of Public Utilities, State of Wisconsin.
- Wisconsin State Legislature, "The Wisconsin Environmental Policy Act", Wisconsin State

Statute, Chapter 274.

Wisconsin State Legislature, Wisconsin Legislative Code, Chapter 68, Municipal Administrative Procedure, State of Wisconsin.

Appendix F
Results of "Preliminary" Analysis of New Fuel Prices on Overall Prices

**(In the interest of timeliness this Appendix has not been translated
from Lithuanian to English.)**

KURO-ENERGETINIŲ RESURSŲ PABRANGIMŲ (TAKA KITOS PRODUKCIJOS)
KAINOMS IR GARYBOS STRUKTŪRAI

| PERIODAS | 1991.01.01 - 1992.02.01 | | | | | | | | | | | | | | 1992.02.01 - 1992.04.01 | | | | Perspektyvinis variantas | | | |
|--|--------------------------------|---------------------------------|--------------------------------|---------------------------------|--------------------------------|---------------------------------|--------------------------------|---------------------------------|--------------------------------|---------------------------------|--------------------------------|---------------------------------|--------------------------------|---------------------------------|--------------------------------|---------------------------------|--------------------------------|---------------------------------|--------------------------------|---------------------------------|--|--|
| | I | | II | | III | | IV | | V | | VI | | VII | | VIII | | IX | | X | | | |
| | Resursų Išnašos Indeksas | Produktų Išnašos Indeksas | | |
| 001 Elektros ir šilumos energetika | 2.03 | 2.04 | 7.05 | 7.05 | 11.72 | 11.72 | 19.00 | 21.19 | 28.55 | 39.83 | 48.66 | | | | | | | | | | | |
| 002 Naftos gavybos produktai | 1.15 | 1.17 | 35.7 | 35.7 | 35.7 | 35.7 | 35.7 | 37.50 | 35.7 | 38.57 | 35.6 | 53.60 | 53.6 | 56.46 | 53.6 | 57.84 | 119 | 119 | 119.00 | | | |
| 003 Naftos perdirbimo produktai | 1.10 | 1.11 | 18.25 | 18.25 | 35.00 | 35.00 | 35.00 | 35.78 | 35.00 | 35.78 | 35.00 | 43.62 | 74.30 | 74.30 | 74.30 | 75.66 | 74.30 | 113.45 | 113.45 | | | |
| 004 Dujų pramonės produktai | 8.82 | 8.82 | 8.82 | 8.82 | 10.81 | 10.81 | 10.81 | 12.64 | 68.50 | 68.50 | 68.50 | 69.39 | 68.50 | 72.38 | 158.70 | 158.70 | 158.70 | 158.70 | 158.70 | | | |
| 005 Anglis | 1.14 | 1.14 | 9.52 | 9.52 | 11.43 | 11.43 | 11.43 | 12.64 | 68.50 | 68.50 | 68.50 | 69.39 | 68.50 | 72.38 | 158.70 | 158.70 | 158.70 | 158.70 | 158.70 | | | |
| 005 Būrpės | 1.10 | 1.11 | 2.60 | 2.60 | 10.80 | 10.80 | 10.80 | 12.50 | 10.80 | 12.50 | 10.80 | 14.21 | 10.80 | 16.91 | 10.80 | 18.19 | 10.80 | 21.42 | 21.42 | | | |
| 007 Metalurgijos pramonės produkcija | 1.12 | 1.14 | 2.61 | 2.61 | 3.98 | 3.98 | 4.88 | 5.52 | 4.88 | 5.52 | 5.52 | 7.69 | 5.52 | 7.69 | 5.52 | 7.69 | 5.52 | 7.69 | 7.69 | | | |
| 008 Pagrindinės chemijos produktai | 2.55 | 2.56 | 4.50 | 4.51 | 6.31 | 6.31 | 17.22 | 18.08 | 20.94 | 37.78 | 41.20 | | | | | | | | | | | |
| 009 Sintetinės saulos ir plastmasės | 2.33 | 2.34 | 4.14 | 4.14 | 5.81 | 5.81 | 15.19 | 15.98 | 18.62 | 33.11 | 36.28 | | | | | | | | | | | |
| 010 Kitų chemijos ir naftos chemijos pramonės šakų produktai | 1.37 | 1.37 | 2.29 | 2.29 | 2.29 | 2.29 | 3.15 | 5.75 | 6.15 | 7.51 | 11.50 | 13.12 | | | | | | | | | | |
| 011 Naftinų gavyba ir metalo apdirbimas | 1.14 | 1.15 | 1.84 | 1.84 | 2.48 | 2.48 | 3.47 | 3.78 | 4.79 | 6.29 | 7.51 | | | | | | | | | | | |
| 012 Baldai | 1.13 | 1.15 | 1.78 | 1.78 | 2.36 | 2.36 | 3.34 | 3.62 | 4.54 | 5.98 | 7.09 | | | | | | | | | | | |
| 013 Celiuliozės ir popieriaus pramonės produkcija | 1.23 | 1.25 | 1.96 | 1.96 | 2.62 | 2.62 | 4.29 | 4.60 | 5.65 | 8.16 | 9.42 | | | | | | | | | | | |
| 014 Kita ašio ir aedžio apdirbimo pramonės produkcija | 1.18 | 1.20 | 2.18 | 2.18 | 3.09 | 3.09 | 4.40 | 4.83 | 6.27 | 8.18 | 9.92 | | | | | | | | | | | |
| 015 Cementas ir asbesto-cemento gaminiai | 1.26 | 1.28 | 5.43 | 5.43 | 9.30 | 9.30 | 11.21 | 13.03 | 19.16 | 21.99 | 29.32 | | | | | | | | | | | |
| 016 Gelžbetoninės konstrukcijos ir gaminiai | 1.19 | 1.22 | 2.82 | 2.83 | 4.32 | 4.32 | 5.76 | 6.46 | 8.83 | 10.94 | 13.78 | | | | | | | | | | | |
| 017 Kitos statybinės medžiagos | 1.23 | 1.27 | 3.49 | 3.51 | 5.57 | 5.57 | 7.32 | 8.29 | 11.57 | 14.03 | 17.95 | | | | | | | | | | | |
| 018 Stiklo ir porceliano pramonės produktai | 1.57 | 1.57 | 2.30 | 2.30 | 2.97 | 2.97 | 6.97 | 7.29 | 8.36 | 14.52 | 15.80 | | | | | | | | | | | |
| 019 Lengvosios pramonės produkcija | 1.08 | 1.09 | 1.44 | 1.44 | 1.77 | 1.77 | 2.39 | 2.54 | 3.06 | 3.96 | 4.58 | | | | | | | | | | | |
| 020 Mėsa ir mėsos produktai | 1.20 | 1.25 | 2.51 | 2.53 | 3.71 | 3.71 | 5.26 | 5.81 | 7.67 | 9.82 | 12.04 | | | | | | | | | | | |
| 021 Pienas ir pieno produktai | 1.17 | 1.23 | 2.32 | 2.35 | 3.37 | 3.37 | 4.77 | 5.26 | 6.87 | 8.77 | 10.71 | | | | | | | | | | | |
| 022 Kita maisto pramonės produkcija | 1.09 | 1.10 | 1.82 | 1.82 | 2.49 | 2.49 | 3.16 | 3.47 | 4.52 | 5.49 | 6.75 | | | | | | | | | | | |
| 023 Kita pramonės produkcija | 1.11 | 1.13 | 1.84 | 1.84 | 2.50 | 2.50 | 3.35 | 3.66 | 4.70 | 5.94 | 7.19 | | | | | | | | | | | |
| 024 Statyba | 1.10 | 1.11 | 2.39 | 2.39 | 3.57 | 3.57 | 4.30 | 4.86 | 6.73 | 7.00 | 10.04 | | | | | | | | | | | |
| 025 Apsilavininkystės produktai | 1.15 | 1.18 | 2.04 | 2.06 | 2.86 | 2.86 | 4.02 | 4.40 | 5.67 | 7.35 | 8.87 | | | | | | | | | | | |
| 026 Gyvulininkystės produktai | 1.07 | 1.09 | 1.57 | 1.59 | 2.04 | 2.04 | 2.62 | 2.83 | 3.54 | 4.34 | 5.19 | | | | | | | | | | | |
| 027 Transportas | 1.15 | 1.17 | 3.40 | 3.40 | 5.47 | 5.47 | 6.56 | 7.54 | 10.82 | 12.41 | 16.34 | | | | | | | | | | | |
| 028 Rytiai | 1.05 | 1.09 | 1.57 | 1.57 | 2.82 | 2.82 | 2.48 | 2.69 | 3.41 | 3.91 | 4.77 | | | | | | | | | | | |
| 029 Cirkuliacijos šakos | 1.05 | 1.08 | 1.39 | 1.39 | 1.69 | 1.69 | 2.13 | 2.27 | 2.73 | 3.25 | 3.80 | | | | | | | | | | | |
| 030 Kitų veiklos rūšių produktai | 1.07 | 1.08 | 1.52 | 1.53 | 1.93 | 1.93 | 2.48 | 2.67 | 3.31 | 4.11 | 4.87 | | | | | | | | | | | |
| KAINŲ INDEKSAI | | | | | | | | | | | | | | | | | | | | | | |
| Produkcija - viso | 1.17 | 1.19 | 2.76 | 2.76 | 4.15 | 4.15 | 5.43 | 6.13 | 8.44 | 10.32 | 13.34 | | | | | | | | | | | |
| Pramonės produkcija -viso | 1.22 | 1.24 | 3.22 | 3.24 | 4.94 | 4.94 | 6.53 | 7.42 | 10.34 | 12.70 | 16.59 | | | | | | | | | | | |
| iš jos: | | | | | | | | | | | | | | | | | | | | | | |
| kuro-energetinių šakų produkcija | 1.77 | 1.81 | 14.65 | 14.76 | 25.31 | 25.31 | 30.91 | 36.71 | 55.56 | 64.12 | 90.69 | | | | | | | | | | | |
| chemijos ir naftos-chemijos šakų | 1.80 | 1.81 | 3.11 | 3.11 | 4.32 | 4.32 | 9.95 | 10.56 | 12.48 | 21.21 | 23.51 | | | | | | | | | | | |
| maisto ir aedžio apdirbimo | 1.18 | 1.20 | 2.00 | 2.00 | 2.75 | 2.75 | 4.06 | 4.42 | 5.60 | 7.54 | 8.97 | | | | | | | | | | | |
| statybinių aedžiagų pramonės | 1.24 | 1.27 | 3.48 | 3.49 | 5.55 | 5.55 | 7.33 | 8.30 | 11.56 | 14.14 | 18.04 | | | | | | | | | | | |
| maisto pramonės | 1.13 | 1.16 | 2.06 | 2.07 | 2.91 | 2.91 | 3.90 | 4.30 | 5.63 | 7.02 | 8.61 | | | | | | | | | | | |

Impact of fuel price on production price

KURO-ENERGETINIŲ RESURSŲ PABRANGIMO ĮTAKA PAGRINDINIŲ
ŪKIO VYSTYMOSI RODIKLIŲ STRUKTŪRAI

| | Bendroji | | Nacionalinės | | Materialinės | | Vartojimas | | Investicijos | | Įvežimas | | Išvežimas | |
|-----|---|-----------|--------------|-----------|--------------|-----------|------------|-----------|--------------|-----------|----------|-----------|-----------|-----------|
| | produkcija | | pajamos | | sąnaudos | | | | | | | | | |
| | Bazinė | Struktū- | Bazinė | Struktū- | Bazinė | Struktū- | Bazinė | Struktū- | Bazinė | Struktū- | Bazinė | Struktū- | Bazinė | Struktū- |
| | struk- | ira paki- | struk- | ira paki- | struk- | ira paki- | struk- | ira paki- | techno- | ira paki- | struk- | ira paki- | struk- | ira paki- |
| | tūra | ltus | tūra | ltus | tūra | ltus | tūra | ltus | loginė | ltus | tūra | ltus | tūra | ltus |
| | | ikainoms | | ikainoms | | ikainoms | | ikainoms | struktūra | ikainoms | | ikainoms | | ikainoms |
| 001 | PRAMONĖ - viso | 62.59 | 77.86 | 39.57 | 126.11 | 73.09 | 74.42 | 80.28 | 91.42 | | | | | |
| | iš jos: | | | | | | | | | | | | | |
| | elektros ir šilumos energija | 2.26 | 8.25 | 2.05 | -34.51 | 2.36 | 11.29 | 1.92 | 8.51 | | | | | |
| | kuro produktai | 3.90 | 33.66 | 4.08 | 183.27 | 3.82 | 23.01 | 3.11 | 31.13 | | | | | |
| | metalurgijos pramonės produkcija | .74 | .62 | .28 | -.12 | .90 | .67 | .18 | .19 | | | | | |
| | chemijos pramonės produktai | 2.27 | 4.01 | 1.94 | -7.87 | 2.42 | 4.85 | 2.39 | 3.06 | | | | | |
| | mašinų gamyba ir metalo apdirbimas | 14.00 | 7.89 | 16.52 | -1.50 | 12.86 | 8.56 | 8.04 | 5.49 | | | | | |
| | medžio apdirbimo pramonės produkcija | 3.22 | 2.17 | 4.45 | -.85 | 2.78 | 2.38 | 2.81 | 1.94 | | | | | |
| | statybinių medžiagų pramonės produkcija | 2.90 | 3.95 | 2.51 | -6.57 | 3.09 | 4.70 | .41 | .70 | | | | | |
| | lengvosios pramonės produkcija | 13.46 | 4.62 | 14.36 | 3.92 | 13.04 | 4.67 | 18.73 | 7.79 | | | | | |
| | maisto pramonės produkcija | 17.81 | 11.50 | -8.60 | -9.13 | 29.86 | 12.97 | 39.47 | 36.17 | | | | | |
| 002 | STATYBA | 9.91 | 7.47 | 15.18 | -6.33 | 7.51 | 8.45 | .00 | .00 | | | | | |
| 003 | ZEMĖS ŪKIS | 20.51 | 9.85 | 30.77 | -5.82 | 15.82 | 10.96 | 9.72 | 6.02 | | | | | |
| 004 | TRANSPORTAS IR RYSIAI | 3.10 | 3.67 | 4.97 | -15.94 | 2.18 | 5.07 | 1.43 | 2.12 | | | | | |
| 005 | CIRKULIACIJOS SAKOS | 3.30 | .54 | 6.35 | 1.80 | 1.00 | .88 | .00 | .00 | | | | | |
| 006 | KITŲ VEIKLOS RŪŠIŲ PRODUKTAI | .59 | .22 | 1.17 | .19 | .33 | .22 | .99 | .44 | | | | | |
| | VISO: | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |

50

Appendix G
National Income and Product Accounts: 1989-1992 (2nd Quarter)
**(In the interest of timeliness this Appendix has not been translated
from Lithuanian to English.)**

Balance of inhabitants' income and expenditure (in million rubles)

(Monetary) Income

1. Wages and salaries
2. Income of such a kind or wages and salaries
3. Monetary income from collective farms
4. Receipts from sold agricultural products
5. Pensions and benefits
6. Grants
7. Receipts from financial system
8. Other receipts
9. Money received by remittances and by letters of credit

Total monetary income

(Monetary) Expenditure

1. Expenditure for goods and service of which
for goods
for service
2. Taxes and voluntary contributions of which
taxes and duties
voluntary contributions
3. Money, sent by remittances and by letters of credit
4. Increase in deposits

Total monetary expenditure and savings

Results (income minus expenditure and savings)

SVYVENTOJU PINIGINIU PAJAMU IR ISLAIDU DINAMIKA

(mln. rb)

| | 1991 | | 1992 1 ket. | | 1992 2 ket. | | |
|--|----------|----------|-------------|------------|-------------|------------|------------|
| | 12k./1k. | 13k./2k. | 14k./3k. | 11-1k./4k. | 12-1k./4k. | 11-2k./1k. | 12-2k./1k. |
| PINIGINES PAJAMOS | | | | | | | |
| 1. Darbo užmokestis | 1.42 | 1.23 | 1.37 | 1.51 | 1.59 | 1.13 | 1.18 |
| 2. Darbo užmokesčio tipo pajamos | 1.19 | .94 | 1.01 | 1.07 | 1.11 | 1.07 | 1.09 |
| 3. Piniginės pajamos iš kolūkių | 1.45 | .96 | 1.22 | .73 | .70 | .97 | .92 |
| 4. Įplaukos už parduotus žemės ūkio produktus | 4.47 | 1.77 | 1.25 | 1.24 | 1.38 | 1.06 | 1.12 |
| 5. Pensijos ir pašalpos | 1.45 | 1.57 | 1.30 | 1.30 | 1.44 | 1.28 | 1.21 |
| 6. Stipendijos | 2.36 | 1.37 | 1.72 | 1.65 | 1.82 | 1.34 | 1.43 |
| 7. Įplaukos iš finansų sistemos | .91 | .88 | 1.00 | .92 | .77 | .92 | .91 |
| 8. Kitos įplaukos | .23 | 1.34 | 1.35 | 2.20 | 2.42 | 1.15 | 1.14 |
| 9. Pinigai, gauti perlaidomis ir pagal akreditivus | | | | | | | |
| Iš viso piniginių pajamų | 1.45 | 1.32 | 1.32 | 1.39 | 1.48 | 1.14 | 1.17 |
| PINIGINES ISLAIDOS | | | | | | | |
| 1. Prekių pirkimas ir paslaugų apmokėjimas | | | | | | | |
| prekių pirkimas | 1.57 | 1.13 | 1.52 | 1.44 | 1.54 | 1.14 | 1.16 |
| paslaugų apmokėjimas | 1.57 | 1.12 | | | | 1.11 | 1.13 |
| 2. Privačiomis mokesčiais ir laisvanoriški inaišai | 1.55 | 1.18 | | | | 1.25 | 1.29 |
| laisvanoriški inaišai | 1.85 | 1.00 | 1.00 | 2.32 | 2.59 | 1.23 | 1.27 |
| mokesčiai ir rinkliavos | 2.34 | .99 | | | | 1.20 | 1.25 |
| laisvanoriški inaišai | 1.14 | 1.04 | | | | 1.50 | 1.40 |
| 3. Pinigai, išsiųsti pagal perl. ir inaišus į akred. | | | | | | | |
| 4. Indėlių prieaugis | -0.53 | -0.85 | 3.66 | .00 | .00 | | |
| Iš viso piniginių išlaidų ir santaupų | 1.26 | 1.24 | 1.55 | 1.35 | 1.46 | 1.15 | 1.18 |
| Pajamos viršija išlaidas | -0.69 | 2.86 | -0.69 | .75 | 1.00 | 1.67 | 1.50 |

4/1

BYVENTOJU PINIGINIŲ PAJAMŲ IR ISLAIDŲ BALANSO STRUKTŪRA

(mln. Lt) %

| | 1989 | 1990 | 1991 | | | | 1991 | 1992 1 ket. | | 1992 2 ket. | |
|---|--------|--------|--------|--------|--------|--------|--------|-------------|--------|-------------|--------|
| | | | 1 ket. | 2 ket. | 3 ket. | 4 ket. | | 1 var. | 2 var. | 1 var. | 2 var. |
| PINIGINĖS PAJAMOS | | | | | | | | | | | |
| 1. Darbo užmokestis | 58.14 | 59.46 | 59.99 | 58.96 | 54.90 | 57.06 | 57.29 | 62.08 | 61.36 | 61.42 | 61.86 |
| 2. Darbo užmokesčio tipo pajamos | 1.95 | 1.83 | 2.04 | 1.68 | 1.21 | .93 | 1.33 | .71 | .69 | .67 | .65 |
| 3. Piniginės pajamos iš kolūkių | 6.26 | 6.74 | 6.31 | 6.32 | 6.04 | 5.59 | 6.68 | 2.95 | 2.63 | 2.51 | 2.06 |
| 4. Įplaukos už parduotus žemės ūkio produktus | 9.75 | 8.85 | 4.04 | 12.46 | 16.73 | 15.83 | 13.65 | 14.19 | 14.70 | 13.22 | 14.05 |
| 5. Pensijos ir pašalpos | 11.64 | 12.08 | 14.77 | 14.83 | 17.72 | 17.44 | 16.58 | 16.33 | 16.92 | 16.33 | 17.56 |
| 6. Stipendijos | .44 | .39 | .46 | .75 | .78 | 1.02 | .81 | 1.21 | 1.25 | 1.42 | 1.53 |
| 7. Įplaukos iš finansų sistemos | 3.89 | 5.62 | 2.96 | 1.85 | 1.24 | .94 | 1.51 | .62 | .49 | .50 | .38 |
| 8. Kitos įplaukos | 5.12 | 3.03 | 7.19 | 1.16 | 1.17 | 1.20 | 2.05 | 1.90 | 1.96 | 1.92 | 1.91 |
| 9. Pinigai, gauti perlaido- mis ir pagal akredityvus | .81 | .00 | .24 | .00 | .20 | .00 | .09 | .00 | .00 | .00 | .00 |
| Iš viso piniginių pajamų | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| PINIGINĖS ISLAIDOS | | | | | | | | | | | |
| 1. Prekių pirkimas ir paslaugų apmokėjimas | 92.62 | 86.86 | 71.60 | 89.53 | 81.41 | 79.80 | 80.92 | 84.63 | 84.09 | 83.53 | 82.84 |
| prekių pirkimas | 90.30 | 85.73 | 86.56 | 86.69 | 86.12 | | | 79.05 | 78.52 | 76.92 | 76.20 |
| paslaugų apmokėjimas | 9.70 | 10.27 | 13.44 | 13.31 | 13.88 | | | 20.95 | 21.48 | 23.08 | 23.60 |
| 2. Privalomi mokesčiai ir laisvanoriški įnašai | 11.92 | 12.93 | 11.69 | 17.17 | 13.85 | 8.96 | 12.29 | 15.37 | 15.91 | 16.47 | 17.16 |
| mokesčiai ir rinkliavos | 59.85 | 59.71 | 59.11 | 74.87 | 73.86 | | | 87.95 | 86.49 | 85.37 | 85.11 |
| laisvanoriški įnašai | 40.15 | 40.29 | 40.89 | 25.13 | 26.14 | | | 12.05 | 13.51 | 14.63 | 14.89 |
| 3. Pinigai, išsiųsti pagal perl. ir inešti į akred. | .00 | .14 | .00 | .25 | .00 | .00 | .00 | | | | |
| 4. Indėlių prieaugis | 5.46 | .08 | 16.51 | -6.96 | 4.74 | 11.24 | 6.70 | | | | |
| Iš viso piniginių išlaidų ir santaupų | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| Pajamos viršija išlaidas | | | | | | | | | | | |

KS

SVENTOJU PINIGINIU PAJAMU IR ISLAIDU BALANSAS

(mln. Lt) %

| | 1989 | 1990 | 1991 | | | | 1991 | 1992 1 ket. | | 1992 2 ket. | |
|---|--------|---------|--------|--------|--------|--------|---------|-------------|--------|-------------|--------|
| | | | 1 ket. | 2 ket. | 3 ket. | 4 ket. | | 1 var. | 2 var. | 1 var. | 2 var. |
| PINIGINES PAJAMOS | | | | | | | | | | | |
| 1. Darbo užmokestis | 5150.5 | 5948.9 | 1807.1 | 2572.5 | 3152 | 4326 | 11857.6 | 6518 | 6890 | 7340 | 8100 |
| 2. Darbo užmokesčio tipo pajamos | 172.4 | 183.3 | 61.6 | 73.4 | 69.3 | 70.2 | 274.5 | 75 | 78 | 80 | 85 |
| 3. Piniginės pajamos iš kolūkių | 731.4 | 874.8 | 250.3 | 362.9 | 346.9 | 423.4 | 1383.5 | 310 | 295 | 300 | 270 |
| 4. Įplaukos už parduotus žemės ūkio produktus | 864.1 | 885.2 | 121.6 | 543.5 | 960.6 | 1200 | 2825.7 | 1490 | 1650 | 1580 | 1840 |
| 5. Pensijos ir pašalpos | 1031.2 | 1208.9 | 444.9 | 647.1 | 1017.3 | 1322.3 | 3431.6 | 1715 | 1900 | 2190 | 2300 |
| 6. Stipendijos | 38.8 | 39.2 | 13.8 | 32.6 | 44.8 | 77.1 | 168.3 | 127 | 140 | 170 | 200 |
| 7. Įplaukos iš finansų sistemos | 344.8 | 562.5 | 89.2 | 80.9 | 71 | 71 | 312.1 | 65 | 55 | 60 | 50 |
| 8. Kitos įplaukos | 453.7 | 302.7 | 216.5 | 50.4 | 67.3 | 91 | 425.2 | 200 | 220 | 230 | 250 |
| 9. Pinigai, gauti perlaidomis ir pagal akredityvus iš viso piniginių pajamų | 71.8 | | 7.3 | | 11.7 | | 19 | | | | |
| | 8858.7 | 10005.5 | 3012.3 | 4363.3 | 5740.9 | 7581 | 20697.5 | 10500 | 11228 | 11950 | 13095 |
| PINIGINES ISLAIDOS | | | | | | | | | | | |
| 1. Prekių pirkimas ir paslaugų apmokėjimas | 7185.2 | 8011.1 | 2373.6 | 3724.6 | 4200.6 | 6367.7 | 16666.5 | 9140 | 9778 | 10400 | 11345 |
| prekių pirkimas | 6488.2 | 7188.1 | 2054.5 | 3228.7 | 3617.7 | | | 7225 | 7678 | 8000 | 8645 |
| paslaugų apmokėjimas | 697 | 823 | 319.1 | 495.9 | 582.9 | | | 1915 | 2100 | 2400 | 2700 |
| 2. Privalomi mokesčiai ir laisvanoriški įnašai | 1036.7 | 1192.7 | 386.4 | 714.4 | 714.6 | 715 | 2530.4 | 1660 | 1850 | 2050 | 2350 |
| mokesčiai ir rinkliavos | 620.5 | 712.2 | 228.4 | 534.9 | 527.8 | | | 1460 | 1600 | 1750 | 2000 |
| laisvanoriški įnašai | 416.2 | 480.5 | 158 | 179.5 | 186.8 | | | 200 | 250 | 300 | 350 |
| 3. Pinigai, išsiųsti pagal perl. ir įnešti į akred. | | 12.5 | | 10.5 | | | | | | | |
| 4. Indėlių prieaugis | 474.9 | 7 | 545.9 | -289.5 | 244.8 | 896.9 | 1398.1 | | | | |
| Iš viso piniginių išlaidų ir santaupų | 8696.8 | 9223.3 | 3305.9 | 4160 | 5160 | 7979.6 | 20595 | 10800 | 11628 | 12450 | 13695 |
| Pajamos viršija išlaidas | 161.9 | 782.2 | -293.6 | 203.3 | 580.9 | -398.6 | 102.5 | -300 | -400 | -500 | -600 |

5

Appendix H
Price Indexes for Goods and Services: 1991-1992

**(In the interest of timeliness this Appendix has not been translated
from Lithuanian to English.)**

duomenys apie būtiniausių (išvardintų
lentelėje) vartojamų prekių kainų pokyčius

(procentais)

| Prekių ir prekių grupių pavadinimai | 1991 m. rugsėjo mėn. palyginti su | 1991 m. gruodžio mėn. palyginti su | 1992 m. vasario mėn. palyginti su |
|-------------------------------------|-----------------------------------|------------------------------------|-----------------------------------|
| | 1990 m. gruodžio mėn. | 1990 m. gruodžio mėn. | 1990 m. gruodžio mėn. |
| Maisto prekės iš viso | 228,2 | 561,3 | 1648 |
| iš jų: | | | |
| Mėsa ir jos produktai | 330,4 | 795,6 | 2129 |
| Žuvis ir jų produktai | 297,9 | 901,0 | 2904 |
| Sviestas | 280,3 | 562,0 | 2299 |
| Aliejus | 366,2 | 1438,3 | 5996 |
| Pienas ir jo produktai | 258,4 | 520,0 | 2616 |
| Kiaušiniai | 194,1 | 739,9 | 1565 |
| Riebalai | 158,4 | 329,3 | |
| Sūriai | 367,6 | 743,6 | |
| Cukrus | 381,0 | 918,3 | 1381 |
| Konditerijos gaminiai | 248,5 | 1145,8 | 1551 |
| Arbatžolės | 281,4 | 301,5 | |
| Druska | 325,4 | 352,2 | 450 |
| Miltai | 269,9 | 614,9 | 871 |
| Duona, duonos ir pyrago gaminiai | 284,9 | 703,8 | 1304 |
| Kruopos | 338,1 | 695,6 | 777 |
| Makaronai | 400,9 | 647,5 | 1010 |
| Bulvės | 650,1 | 1030,1 | 968 |
| Daržovės | 58,4 | 515,3 | 992 |
| Alkoholiniai gėrimai | 222,5 | 397,7 | |
| Nealkoholiniai gėrimai | 311,4 | 711,9 | |
| Nemaisto prekės iš viso | 228,9 | 435,5 | 1191 |

/ lentelės tęsinys

(procentais)

| Prekių ir prekių grupių pavadinimai | 1991 m. rugsėjo mėn. palyginti su | 1991 m. gruodžio mėn. palyginti su | 1992 m. vasario mėn. palyginti su |
|---|-----------------------------------|------------------------------------|-----------------------------------|
| | 1990 m. gruodžio mėn. | 1990 m. gruodžio mėn. | 1990 m. gruodžio mėn. |
| Iš jų: | | | |
| Audiniai | 323,0 | 549,5 | |
| Drabužiai ir baltiniai | 219,0 | 500,7 | 857 |
| Kailiniai ir kailių gaminiai | 206,9 | 415,4 | |
| Trikotažo gaminiai | 220,0 | 415,2 | 1133 |
| Kojinės ir puskojinės | 187,6 | 415,1 | 1035 |
| Odinė, tekstilinė ir kombinuotoji avalynė | 206,1 | 538,6 | 1771 |
| Skalbimo muilas | 200,0 | 370,1 | 1043 |
| Tualetinis muilas | 207,8 | 445,7 | 635 |
| Sintetinės plovimo priemonės | 167,7 | 279,6 | 991 |
| Baldai | 439,8 | 1000,9 | 2791 |
| Kilimai ir kiliminiai takai | 166,9 | 475,1 | 2424 |
| Elektros prekės | 424,3 | 1269,7 | 5171 |
| Siūlai | 320,4 | 795,8 | |
| Tabako gaminiai | 106,4 | 205,2 | |
| Popierius ir kanceliarinės prekės | 276,5 | 514,8 | |
| Sporto prekės | 322,6 | 321,8 | |
| Radio prekės | 209,1 | 464,9 | |
| Buitinės paskirties prekės | 238,5 | 641,9 | |
| Statybinės medžiagos | 260,6 | 634,0 | |
| Lengvieji automobiliai | 170,8 | 174,4 | |
| Medikamentai ir cheminės prekės | 237,9 | 241,5 | |
| Porceliano, fajanso ir stikliniai indai | 293,0 | 528,1 | |
| Kitos nemaisto prekės | 416,5 | 1176,5 | |

lentelė. Buitinių paslaugų gyventojams
kainų ir tarifų indeksai

(procentais)

| Paslaugų rūšys | 1991 m. rugsėjo mėn. palyginti su | 1991 m. gruodžio mėn. palyginti su | 1992 m. vasario mėn. palyginti su |
|--|-----------------------------------|------------------------------------|-----------------------------------|
| | 1990 m. gruodžio mėn. | 1990 m. gruodžio mėn. | 1990 m. gruodžio mėn. |
| Buitinės paslaugos (be medžiagų, atsarginių dalių vertės) iš viso: | 276,4 | 505,8 | |
| iš to skaičiaus: | | | |
| Avalynės taisymas | 248,1 | 472,9 | |
| Individualus avalynės siuvimas | 255,0 | 531,7 | |
| Drabužių taisymas | 311,8 | 657,9 | |
| Individualių siuvinų, kailinių ir odinių bei tekstilinės galanterijos gaminių siuvimas | 341,7 | 558,4 | |
| Individualių trikotažo gaminių siuvimas ir mezgimas | 304,9 | 480,0 | |
| Piliečiams priklausantių transporto priemonių remontas | 259,0 | 488,1 | |
| Baldų remontas | 300,2 | 660,6 | |
| Baldų gaminimas | 322,8 | 622,7 | |
| Drabužių cheminis valymas ir dažymas | 323,1 | 528,2 | |
| Skalbyklų paslaugos | 390,5 | 734,1 | |
| Gyvenamųjų namų (butų remontas) | 291,7 | 448,0 | |
| Fotografijų paslaugos | 224,0 | 415,8 | |
| Kirpyklų paslaugos | 322,9 | 630,7 | |
| Pirčių ir dušų paslaugos | 366,7 | 738,9 | |
| Nuomos punktų paslaugos | 310,6 | 697,6 | |
| Ritualinės paslaugos | 232,0 | 523,6 | |

3 lentelė. Komunalinių paslaugų
tarifų indeksai

(procentais)

| Paslaugų rūšys | 1991 m. rugsėjo mėn. palyginti su | 1991 m. gruodžio mėn. palyginti su | 1992 m. vasario mėn. palyginti su |
|-------------------------------|-----------------------------------|------------------------------------|-----------------------------------|
| | 1990 m. gruodžio mėn. | 1990 m. gruodžio mėn. | 1990 m. gruodžio mėn. |
| Komunalinės paslaugos iš viso | 174,0 | | |
| iš to skaičiaus: | | | |
| Elektros energijos tiekimas | 125,0 | | |
| Šalto vandens tiekimas | 306,5 | | |
| Kanalizacijos paslaugos | 268,3 | | |
| Dujų tiekimas iš viso | 171,1 | | |
| iš to skaičiaus: | | | |
| Gamtinių dujų | 132,3 | | |
| Suskystintų dujų | 211,0 | | |
| Centrinis šildymas | 220,0 | | |
| Karšto vandens tiekimas | 262,6 | | |
| Sanitrinis valymas | 313,4 | | |

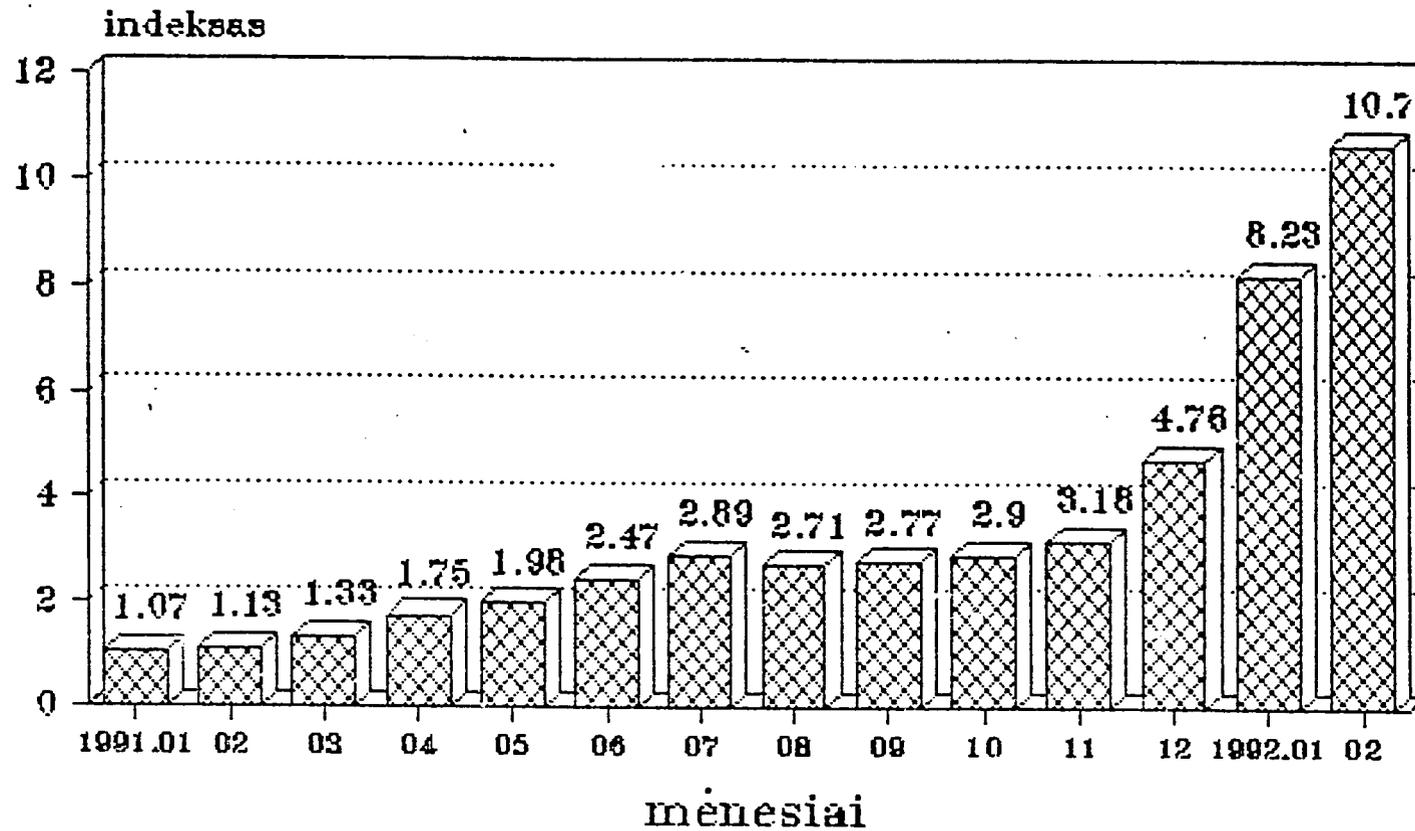
4 lentelė. Vartojamų prekių ir mokamų paslaugų gyventojams kainų ir tarifų indeksai Baltijos valstybėse 1991 m. III ketvirtį palyginus su 1990 m. III ketvirčiu

| | (procentais) . | | |
|---|----------------|---------|--------|
| Prekių ir paslaugų grupių pavadinimai | Lietuva | Latvija | Estija |
| Vartojamos prekės ir mokamos paslaugos | 295,3 | 230,7 | 370,1 |
| Visos prekės | 302,8 | 232,0 | 394,9 |
| iš to skaičiaus: | | | |
| maisto | 280,5 | 219,5 | 453,1 |
| nemaisto | 326,0 | 242,9 | 316,6 |
| Mokamos paslaugos | 225,4 | 270,4 | 257,6 |
| iš to skaičiaus: | | | |
| buitinės | 255,4 | 270,4 | 257,6 |
| keleivinio transporto | 242,4 | 214,0 | 199,9 |
| ryšių | 279,3 | 206,6 | 224,4 |
| kultūros | 201,5 | 240,4 | 217,1 |
| sanatorinės-kurortinės ir sveikatingumo | 386,7 | 353,2 | 276,2 |
| butų ūkio | 110,3 | 166,4 | |
| komunalinės | 171,5 | 138,2 | 169,3 |

Appendix I
Monthly Price Increases for All Goods and Services: January 1991-February 1992

**(In the interest of timeliness this Appendix has not been translated
from Lithuanian to English.)**

Suvestinio kainų indekso kitimo dinamika

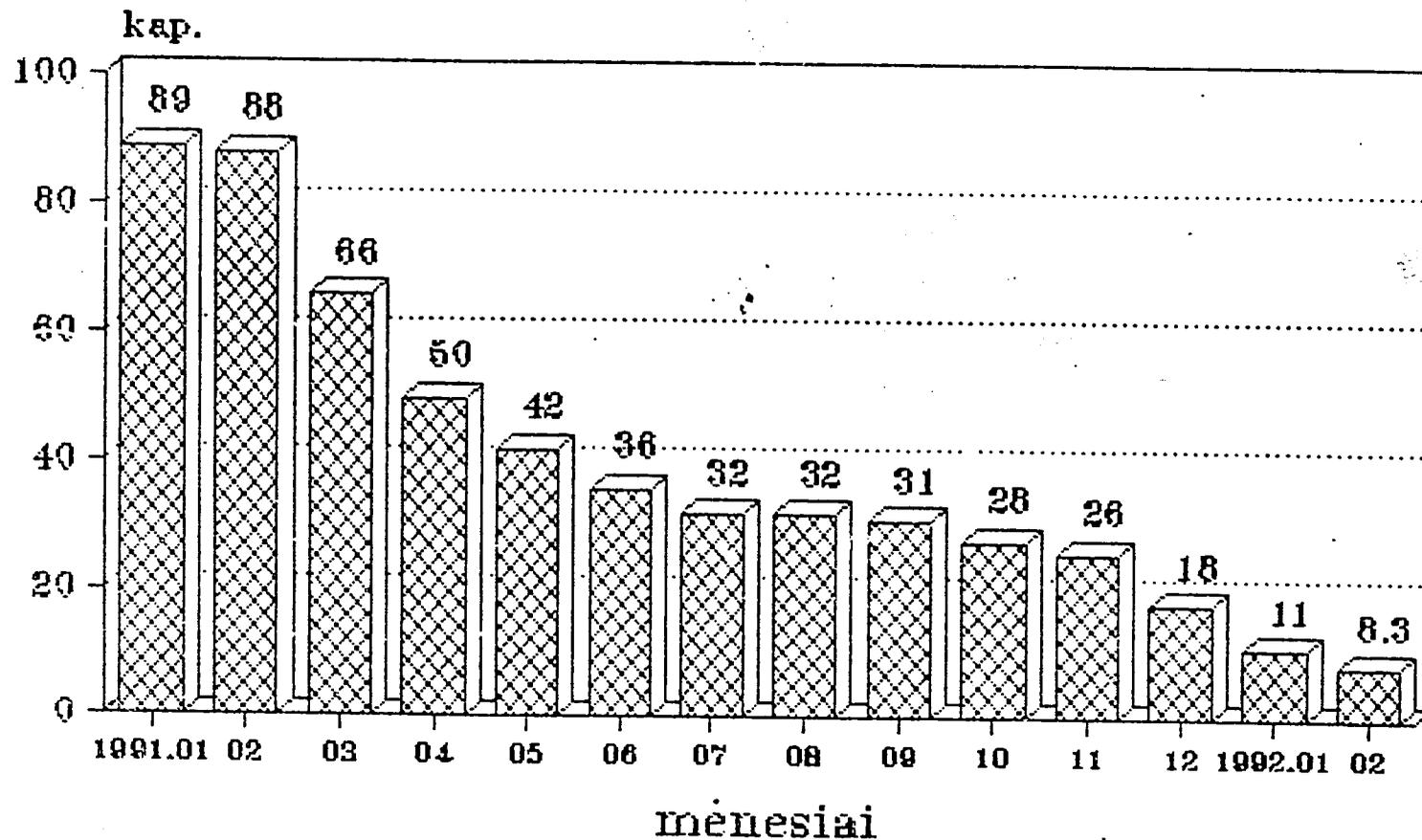


Lyginant su 1990 m. gruodžiu

Appendix J
Monthly Purchasing Power of the Ruble: January 1991-February 1992

**(In the interest of timeliness this Appendix has not been translated
from Lithuanian to English.)**

Pinigų perkamosios galios kitimo dinamika



1990 m. gruodžio mėn. - 100 kap.

Appendix K

Estimated Minimum Cost of Living Per Capita: March 1992

(This information is currently used as the basis for determining wages in all branches.)

**(In the interest of timeliness this Appendix has not been translated
from Lithuanian to English.)**

4/ 9/1992

Indeksuoto minimalaus gyvenimo lygio maisto produktų rinkinys vienam šeimos nariui
1992.03.01 kainomis (statistinis-normatyvinis metodas)

Food

| | Seimos nariui | | | | | | | | |
|--|---|--|---------------------|------|--------|--------|----------------|-----|--|
| | Suvartotų pro- | | Produktų, suvartotų | | | | Suvartotų pro- | | |
| | duktų kiekis | | per parą, sudėtis | | | | duktų vertė | | |
| | lper me- per pa- B R A K lper me- per pa- | ltus-kg ltus-rb gr gr gr kkal ltus-rb ltus-rb | | | | | | | |
| 1. Grūdinės kultūros | | .01 | | | | | .02 | | |
| 2. Ankštinės | 1.37 | 3.76 | .61 | .05 | 1.91 | 10.54 | 13.02 | .04 | |
| 3. Kvietiniai miltai | 11.94 | 32.72 | 2.92 | .36 | 22.86 | 106.34 | 35.55 | .10 | |
| 4. Ruginiai miltai | .05 | .13 | .01 | | .09 | .41 | .13 | | |
| 5. Kiti miltai | | | | | | | | | |
| 6. Ryžiai | 3.00 | 8.21 | .48 | .49 | 5.97 | 26.26 | 17.64 | .05 | |
| 7. Kruopos | 5.46 | 14.96 | 1.35 | .27 | 9.78 | 46.97 | 13.92 | .04 | |
| 8. Kvietinė duona | 32.98 | 90.37 | 6.02 | 2.11 | 46.87 | 231.71 | 157.48 | .46 | |
| 9. Ruginė ir kitokia duona | 54.49 | 149.29 | 6.02 | 1.24 | 65.12 | 296.49 | 137.19 | .40 | |
| 10. Makaronų gaminiai | 2.96 | 8.10 | .74 | .11 | 5.71 | 26.77 | 15.82 | .05 | |
| Duonos produktai-viso | 88.56 | 242.64 | 18.15 | 4.63 | 158.32 | 745.53 | | | |
| 11. Bulvės | 106.77 | 297.52 | 3.01 | .20 | 39.49 | 172.29 | 242.44 | .70 | |
| 12. Švieži, rauginti ir marinuoti kopūstai | 17.96 | 49.20 | .47 | | 1.64 | 8.76 | 47.34 | .14 | |
| 13. Švieži, rauginti ir marinuoti agurkai bei pomidorai | 19.05 | 52.19 | .34 | | 1.28 | 6.78 | 187.78 | .54 | |
| 14. Valgomieji burokėliai, mor- kos, ridikėliai ir kiti šakniavaisiai | 19.14 | 32.44 | .47 | .02 | 3.18 | 14.89 | 46.31 | .13 | |
| 15. Kitos šviežios, sūdytos ir marinuotos daržovės | 9.16 | 25.10 | .24 | .01 | 1.47 | 6.98 | 92.92 | .27 | |
| 16. Daržovių konservai | 7.04 | 19.29 | .38 | .30 | 1.52 | 10.67 | 77.73 | .23 | |
| Daržovių - viso | 72.35 | 198.21 | 4.91 | .53 | 48.57 | 220.37 | | | |
| 17. Arbūzai, melionai, moliūgai, agurkai Daržovės ir moliūgi- nės kultūros-viso | 3.73 | 10.21 | .03 | | 5.10 | 2.16 | 15.11 | .04 | |
| 18. Vaisiai, uogos (švie- ži, marinuoti) | 76.07 | 208.42 | 4.94 | .53 | 53.68 | 222.53 | | | |
| 19. Šviežios vynuogės | 30.55 | 83.71 | .42 | .30 | 6.55 | 32.23 | 269.03 | .78 | |
| 20. Džiovinti vaisiai | 1.61 | 4.42 | .01 | | .64 | 2.65 | 26.51 | .08 | |
| 21. Vaisių-uogų konservai | .38 | 1.05 | .03 | | .68 | 2.87 | 10.27 | .03 | |
| Vaisių-uogų - viso | 16.15 | 44.26 | .16 | | 6.27 | 26.91 | 138.03 | .40 | |
| 22. Cukrus | 47.89 | 131.21 | .62 | .30 | 14.14 | 64.66 | | | |
| 23. Saldainiai, šokoladas, chėva ir pan. | 13.44 | 36.82 | | | 36.42 | 145.67 | 151.35 | .44 | |
| 24. Uogienė, džemas, marmeladas | 5.27 | 14.44 | .39 | 1.80 | 10.60 | 60.31 | 169.45 | .49 | |
| 25. Bičių medus | 5.64 | 15.45 | .05 | | 10.02 | 40.47 | 126.05 | .37 | |
| 26. Sausainiai, tortai pyragaičiai ir kt. Saldūs produktai-viso | .39 | 1.08 | .01 | | .80 | 3.26 | 28.36 | .08 | |
| | 13.11 | 35.92 | 1.88 | 4.53 | 24.25 | 144.20 | 255.04 | .74 | |
| | 27.35 | 74.94 | 2.33 | 6.33 | 82.09 | 393.90 | | | |

| Seimos nariui | | | | | | | | |
|--|---------------------------------|-------------------|--|---------|---------|-----------|--------------------------------|-------------------|
| | Suvartotų pro- dukty kiekis | | Produktų, suvartotų per parą, sudėtis | | | | Suvartotų pro- dukty vertė | |
| | per me- tus-kg | per pa- ra-gr | B gr | R gr | A gr | K kkal | per me- tus-rb | per pa- ra-rb |
| 27. Jautiena ir veršiena | 15.16 | 41.54 | 5.65 | 3.60 | | 55.25 | 359.16 | 1.04 |
| 28. Aviiena ir ožkiena | .27 | .74 | .09 | .07 | | 1.01 | 6.32 | .02 |
| 29. Kiauliena | 25.86 | 70.84 | 8.64 | 19.60 | | 211.10 | 647.51 | 1.88 |
| 30. Kitų naminių gyvulių mėsa ir subproduktai | 7.23 | 19.82 | 2.26 | 1.27 | | 20.53 | 49.00 | .14 |
| 31. Naminiai paukščiai | 12.07 | 33.08 | 3.79 | 3.24 | .08 | 44.69 | 273.65 | .79 |
| 32. Laukinių gyvulių ir paukščių mėsa | .03 | .09 | .01 | .01 | | .12 | | |
| 33. Taukai lydyti ir nelydy- ti(įsk.lašinius) | 6.56 | 17.98 | .03 | 16.85 | | 151.75 | 140.88 | .41 |
| 34. Dešrų gaminiai ir rū- kyta mėsa | 17.53 | 48.02 | 5.87 | 12.39 | .20 | 135.90 | 593.27 | 1.72 |
| 35. Mėsos pusfabrikačiai ir gatavi gaminiai | 5.01 | 13.73 | 1.65 | 2.31 | | 27.32 | 132.76 | .39 |
| 36. Mėsos konservai | .29 | .80 | .12 | .17 | .08 | 2.04 | 20.65 | .06 |
| Mėsos gaminiai-viso | 92.18 | 252.54 | 28.11 | 59.52 | .36 | 649.69 | | |
| 37. Svežia žuvis | 7.47 | 20.45 | 1.72 | .47 | | 11.07 | 126.53 | .37 |
| 38. Žuvis sūdyta, džio- vinta, vytinta ir kt. | 3.07 | 8.42 | 1.47 | .50 | | 10.40 | 60.50 | .19 |
| 39. Įvairi silkė | 2.76 | 7.55 | .74 | .50 | | 7.48 | 57.99 | .17 |
| 40. Žuvies konservai | 1.29 | 3.54 | .53 | .27 | .06 | 4.80 | 32.89 | .10 |
| Žuvies produktai-viso | 15.01 | 41.11 | 4.46 | 1.74 | .06 | 33.75 | | |
| 41. Sviršias ir raugintas nenugriebtas pienas | 123.13 | 337.34 | 9.11 | 10.15 | 15.08 | 191.94 | 225.82 | .66 |
| 42. Nugriebtas pienas | .24 | .66 | .02 | | .03 | .20 | .55 | |
| 43. Grietinė ir grietinėlė | 15.39 | 42.16 | 1.07 | 10.80 | 1.21 | 107.34 | 159.78 | .46 |
| 44. Sviestas | 7.41 | 20.29 | .15 | 15.55 | .17 | 141.24 | 192.41 | .36 |
| 45. Varškė, sūrio masė | 13.80 | 37.80 | 5.55 | 4.31 | 1.72 | 69.07 | 122.88 | .36 |
| 46. Pieno konservai | 1.10 | 3.01 | .21 | .25 | 1.50 | 9.07 | 21.30 | .06 |
| 47. Sūris ir brinza | 2.77 | 7.60 | 1.59 | 1.66 | .02 | 21.84 | 73.32 | .21 |
| 48. Ledai | 2.52 | 6.89 | .23 | .60 | 1.37 | 11.84 | 47.83 | .14 |
| Pieno produktai-viso | 519.52 | 1423.35 | 17.92 | 43.31 | 21.10 | 552.53 | | |
| 49. Kiaušiniai - vnt. | 211.32 | .71 | .21 | .19 | .01 | 2.80 | 260.87 | |
| 50. Margarinas, kombinuoti- ji ir kiti riebalai | 1.32 | 3.61 | .02 | 2.82 | .04 | 25.57 | 11.92 | .03 |
| 51. Aliejus | 2.77 | 7.60 | | 7.21 | | 64.91 | 118.12 | .34 |
| 52. Sveži, sūdyti ir ma- rinuoti grybai | .88 | 2.42 | .03 | .01 | .03 | .32 | 54.31 | .16 |
| 53. Kiti produktai | | | | | | | 145.49 | .41 |
| Viso | | | 76.79 | 126.58 | 329.82 | 2756.19 | 6210.00 | 17.25 |

mėnesiui 517.50
MGL (45%) 1150.00
MGL (47%) 1101.06
MGL (50%) 1035.00
MGL (60%) 862.50

4/ 9/1992

Minimalaus gyvenimo lygio nemaisto prekių rinkinys
vienam šeimos nariui (1992.08.01 kainomis)

| | 1 metams |
|---|----------|
| | 1 rb |
| INDUSTRIAL | |
| 1. Audiniai - viso | 127.85 |
| 2. medvilniniai | 29.66 |
| 3. vilnoniai | 33.58 |
| 4. šilkiniai | 52.13 |
| 5. štapeliniai | 2.08 |
| 6. lininiai ir kiti | 10.41 |
| 7. Apatinis trikotažas | 79.67 |
| 8. Viršutinis trikotažas | 252.79 |
| 9. Kojinės ir puskojinės | 174.67 |
| 10. Avalynė - viso | 535.12 |
| 11. odinė ir iš odos pakaitalų | 481.29 |
| 12. guminė | 30.54 |
| 13. veltinė | 1.59 |
| 14. kita | 21.70 |
| 15. Vienetiniai gaminiai-viso | 140.47 |
| 16. medvilniniai | 87.10 |
| 17. vilnoniai | 32.05 |
| 18. šilkiniai | 7.35 |
| 19. štapeliniai | .39 |
| 20. lininiai ir kiti | 13.58 |
| 21. Gatavi drabužiai (išsk. trikotažinius)-viso | 806.80 |
| 22. medvilniniai | 202.37 |
| 23. vilnoniai | 320.19 |
| 24. šilkiniai | 168.02 |
| 25. štapeliniai | 3.40 |
| 26. kailiniai ir kailiai | 27.47 |
| 27. kiti | 85.34 |
| 28. Galvos apdangalai (išsk. kailinius) | 12.62 |
| 29. Apatiniai baltiniai(išsk. trikotažinius) | 53.92 |
| 30. Galanterija | 204.50 |
| 31. Tūlio ir užuolaidų gaminiai | 47.35 |
| 32. Kultūrinės prekės - viso | 505.87 |
| 33. laikraščiai, knygos, žurnalai | 174.32 |
| 34. sąsiuviniai, popierius, kanc. prekės | 51.95 |
| 35. muzikiniai instrumentai | .00 |
| 36. radijo imtuvai, televizoriai, radijo apar. | 99.07 |
| 37. rankiniai, kišeniniai laikrodžiai | 16.06 |
| 38. kiti laikrodžiai | 7.01 |
| 39. sporto, foto reikmenys ir kt. | 77.50 |
| 40. dviračiai | 79.97 |
| 41. Baldai ir namų apyvokos reikmenys - viso | 722.74 |
| 42. baldai | 502.10 |
| 43. namų apyvokos reikmenys | 119.13 |
| 44. buitiniai elektriniai prietaisai | 101.51 |

4/ 9/1992

Minimalaus gyvenimo lygio paslaugų rinkinys
vienam šeimos nariui 1992.03.01 kainomis

| | metais |
|---|-----------------|
| <i>SERVICES</i> | rb |
| 1. Buitinės paslaugos - viso | 293.50 |
| 2. išlaidos pirtčiai, skalbykl. ir kirpykl. | 82.89 |
| 3. darbo, remont. ir statant statinius, apmok. | 68.75 |
| 4. mokestis už d. buzių siuvimą ir taisymą | 42.75 |
| 5. mokestis už avalynės siuvimą ir taisymą | 17.19 |
| 6. baldų ir namų apyv. reikm. taisym. ir gamin. | .26 |
| 7. elektros prietaisų remontas | 8.11 |
| 8. kultūrinių prekių taisymas | 8.99 |
| 9. kitų buitinių paslaugų apmokėjimas | 64.56 |
| 10. Kultūrinių ir kitų paslaugų apmok. - viso | 1092.26 |
| 11. naudojimasis vaikų įstaigomis | 153.82 |
| 12. kelialap. į sanat., poil. namus ir stovykl. | 47.99 |
| 13. išlaid. teatrui, kinui, cirkui ir kt. | 85.33 |
| 14. transporto išlaidos | 250.86 |
| 15. pašto - telegrafo išlaidos, telefonas | 75.82 |
| 16. apmok. už gyven. plotą ir komunalin. pasl. | 405.88 |
| 17. kitų paslaugų apmokėjimas | 64.56 |
| 18. Paslaugos - viso | 1385.76 |
| | mėnesiui 115.48 |

11

4/ 9/92

Minimalus biudžetinis rinkinys vienam šeimos nariui
1992.03.01 kainomis

| Eil. Nr. | | Mėnesiui rb | Struktūral % |
|----------------------|---|----------------|-----------------|
| <i>TOTAL MINIMUM</i> | | | |
| 1. | Maisto produktai | 517.50 | 45.0 |
| 2. | Nemaisto prekės | 390.95 | 34.0 |
| 3. | Apmokamos paslaugos (įsk. gamybines) | 115.48 | 10.0 |
| 4. | Kitos išlaidos | 45.71 | 4.0 |
| 5. | Privalomieji mokėjimai ir savanoriškos įmokos | 80.60 | 7.0 |
| | Viso: | 1150.00 | 100.0 |

72

Appendix L
Comparison of Consumption of Final Product in the Soviet Union, West Germany and
Lithuania: 1988

**(In the interest of timeliness this Appendix has not been translated
from Lithuanian to English.)**

GALUTINIO VARTOJIMO APIMTIS IR STRUKTŪRA

1988 metais

| | I VOKIETIJA | | I TSRS | | I LIETUVA | |
|-----------------------------|------------------------|------|----------------------|------|----------------------|------|
| | I mln. I I markių I | I % | I mln. I I rub. I | I % | I mln. I I rub. I | I % |
| Viso galutinis produktas | 1415600 | 100 | 472405 | 10 | 11323 | 100 |
| Maistas, gėrimai, tabakas | 206680 | 14,6 | 176460 | 37,4 | 3816 | 33,7 |
| Rūbai ir avalynė | 98500 | 7,0 | 71058 | 15,0 | 1902 | 16,8 |
| Butas, kuras, elektroener. | 229060 | 16,2 | 21030 | 4,4 | 467 | 4,3 |
| Baldai, buitiniai priet. | 109510 | 7,7 | 27653 | 5,9 | 838 | 7,4 |
| Medicinos paslaugos | 197210 | 13,9 | 27706 | 5,9 | 702 | 6,2 |
| Transportas ir ryšiai | 184210 | 13,0 | 33006 | 7,0 | 770 | 6,8 |
| Svietimas, kultūra, poilsis | 202330 | 14,3 | 58228 | 12,3 | 1427 | 12,6 |
| Kitos prekės ir paslaugos | 188100 | 13,3 | 57264 | 12,1 | 1381 | 12,2 |

P.S. 1. Pagal SNO tarptautinių palyginimų programos klasifikaciją

2. TSRS galutiniame produkte įskaitytas ir Lietuvos galutinis produktas

h

Appendix M
Fuel and Petroleum Import and Export Prices: 1991

**(In the interest of timeliness this Appendix has not been translated
from Lithuanian to English.)**

Lietuvos Respublikos Ekonomikos
ministerija, 92.05.01, 15:30

~~EXPORTAS~~ Išvežamų iš Respublikos prekių sąrašas su įvairiomis kainomis

| Produk- cijos kodas | Produkcijos pavadinimas | Matavimo vienetai | Maksimali kaina tūkst.dol | Vidutinė kaina tūkst.dol | Minimali kaina tūkst.dol | 1991 m. kaina tūkst.rub | Veikianti kaina tūkst.rub | Pabran- kimo koefic- ientas |
|---------------------------|--------------------------------|----------------------|---------------------------------|--------------------------------|--------------------------------|-------------------------------|---------------------------------|--------------------------------------|
| | | | 604 | 605 | 606 | 091 | 081 | |
| 010000000 | KURO-ENERGETINIAI IŠTEKLIAI | mln rub | - | - | - | - | - | - |
| 010200000 | Automobilinis benzinas | tūkst t | 242.000 | 230.000 | 231.000 | 211.800 | 12000.000 | 56.657 |
| 011000000 | Kuras reaktyviniams varikliams | tūkst t | 175.000 | 165.000 | 155.000 | 200.000 | 4355.000 | 21.775 |
| 011100000 | Dyzelinis kuras | tūkst t | 200.000 | 176.000 | 200.000 | 154.200 | 9480.000 | 61.479 |
| 014300000 | Suskystintos dujos | tūkst t | 134.000 | 132.000 | 130.000 | 107.000 | 3036.000 | 28.374 |
| 016000000 | Naftos bitumas | tūkst t | 70.000 | 65.000 | 60.000 | 75.000 | 4500.000 | 60.000 |
| 018000000 | Elektros energija | mln kWh | 50.000 | 50.000 | 50.000 | 66.000 | 860.000 | 13.030 |

Lietuvos Respublikos Ekonomikos
ministerija, 92.05.01, 15:30

~~IMPORTAS~~ Įvežamų į Lietuvos Respubliką prekių sąrašas su įvairiomis kainomis

| Produk- cijos kodas | Produkcijos pavadinimas | Matavimo vienetai | Maksimali kaina tūkst.dol | Vidutinė kaina tūkst.dol | Minimali kaina tūkst.dol | 1991 m. kaina tūkst.rub | Veikianti kaina tūkst.rub | Pabran- kimo koefic- ientas |
|---------------------------|---|----------------------|---------------------------------|--------------------------------|--------------------------------|-------------------------------|---------------------------------|--------------------------------------|
| | | | 601 | 602 | 603 | 092 | 082 | |
| 010000000 | KURO-ENERGETINIAI IŠTEKLIAI | mln rub | - | - | - | - | - | - |
| 010100000 | Nafta | tūkst t | 124.870 | 127.000 | 115.440 | 84.000 | 3000.000 | 35.714 |
| 010300000 | Aviacinis benzinas | tūkst t | 210.000 | 209.000 | 208.000 | 207.550 | 7070.000 | 34.064 |
| 010400000 | Žibalas | tūkst t | 135.000 | 132.500 | 130.000 | 139.000 | 4865.000 | 35.000 |
| 010600000 | Kūryklinis mazutas | tūkst t | 60.000 | 59.000 | 56.000 | 82.280 | 2880.000 | 35.002 |
| 010700000 | Laivybinis mazutas | tūkst t | 72.000 | 70.000 | 68.000 | 100.000 | 3100.000 | 31.000 |
| 013000000 | Dyzeliniai tepalai | tūkst t | 480.000 | 470.000 | 460.000 | 600.000 | 21000.000 | 35.000 |
| 013500000 | Kiti tepalai ir alyvos | tūkst t | 450.000 | 445.000 | 440.000 | 574.960 | 20000.000 | 34.785 |
| 014100000 | Gamtinės dujos | mln kub m | 80.000 | 75.000 | 70.000 | 51.000 | 2350.000 | 46.078 |
| 015000000 | Akmens anslis | tūkst t | 31.000 | 30.000 | 29.000 | 60.000 | 1100.000 | 18.333 |
| 019000000 | Atominis kuras (šilumą išskir. rinklės) | kasetės | 77.000 | 77.000 | - | 1490.000 | 1380.000 | 0.926 |

Appendix N
Fuel and Petroleum Import and Export Prices: May 2, 1992

**(In the interest of timeliness this Appendix has not been translated
from Lithuanian to English.)**

Lietuvos Respublikos Ekonomikos
ministerija, 92.05.08 15:30

Išvežamų iš Respublikos prekių sąrašas su įvairiomis kainomis

| Produk- cijos kodas | Produkcijos pavadinimas | Matavimo vienetai | Maksimali kaina tūkst.dol | Vidutinė kaina tūkst.dol | Minimali kaina tūkst.dol | 1991 m. kaina tūkst.rub | Veikianti kaina tūkst.rub | Pabran- gimo koefic- ientas |
|---------------------------|-------------------------|----------------------|---------------------------------|--------------------------------|--------------------------------|-------------------------------|---------------------------------|--------------------------------------|
| | | | 604 | 605 | 606 | 091 | 081 | |

0100000000 KURO-ENERGETINIAI IŠTEKLIAI

| | | | | | | | | |
|------------|--------------------------------|---------|---------|---------|---------|---------|-----------|--------|
| 0102000000 | Automobilinis benzinas | tūkst t | 242.000 | 230.000 | 234.000 | 211.800 | 14882.000 | 70.264 |
| 0110000000 | Kuras reaktyviniams varikliams | tūkst t | 175.000 | 165.000 | 155.000 | 200.000 | 4355.000 | 21.775 |
| 0114000000 | Dyzelinis kuras | tūkst t | 200.000 | 176.000 | 200.000 | 154.200 | 9480.000 | 61.479 |
| 0143000000 | Suskystintos dujos | tūkst t | 134.000 | 132.000 | 130.000 | 107.000 | 7868.000 | 73.533 |
| 0160000000 | Naftos bitumas | tūkst t | 70.000 | 65.000 | 60.000 | 75.000 | 4500.000 | 60.000 |
| 0180000000 | Elektrinė energija | mln kWh | 50.000 | 50.000 | 50.000 | 66.000 | 1000.000 | 15.152 |

Išvežamų iš Lietuvos Respubliką prekių sąrašas su įvairiomis kainomis

| Produk- cijos kodas | Produkcijos pavadinimas | Matavimo vienetai | Maksimali kaina tūkst.dol | Vidutinė kaina tūkst.dol | Minimali kaina tūkst.dol | 1991 m. kaina tūkst.rub | Veikianti kaina tūkst.rub | Pabran- gimo koefic- ientas |
|---------------------------|-------------------------|----------------------|---------------------------------|--------------------------------|--------------------------------|-------------------------------|---------------------------------|--------------------------------------|
| | | | 601 | 602 | 603 | 092 | 082 | |

0100000000 KURO-ENERGETINIAI IŠTEKLIAI

| | | | | | | | | |
|------------|---|-----------|---------|---------|---------|----------|-----------|--------|
| 0101000000 | Nafta | tūkst t | 124.870 | 127.000 | 115.440 | 84.000 | 3000.000 | 35.714 |
| 0103000000 | Aviacinis benzinas | tūkst t | 240.000 | 209.000 | 208.000 | 207.550 | 7070.000 | 34.064 |
| 0104000000 | Zibilas | tūkst t | 135.000 | 132.500 | 130.000 | 139.000 | 4865.000 | 35.000 |
| 0106000000 | Kūryklinis mazutas | tūkst t | 60.000 | 59.000 | 58.000 | 82.280 | 2880.000 | 35.002 |
| 0107000000 | Laivybinis mazutas | tūkst t | 72.000 | 70.000 | 68.000 | 100.000 | 3100.000 | 31.000 |
| 0130000000 | Dyzeliniai tepalai | tūkst t | 480.000 | 470.000 | 460.000 | 600.000 | 2000.000 | 35.000 |
| 0135000000 | Kiti tepalai ir alyvos | tūkst t | 450.000 | 445.000 | 440.000 | 574.960 | 20000.000 | 34.785 |
| 0141000000 | Gamtinės dujos | mln kub m | 80.000 | 75.000 | 70.000 | 51.000 | 3495.000 | 68.529 |
| 0150000000 | Akmens anglis | tūkst t | 34.000 | 30.000 | 29.000 | 60.000 | 1500.000 | 25.000 |
| 0190000000 | Atominis kuras (šilumą išskir. rinkles) | kasetės | 77.000 | 77.000 | - | 1490.000 | 1380.000 | 0.926 |

13

Appendix O
Transaction Table for the 30 Sector Model

**(In the interest of timeliness this Appendix has not been translated
from Lithuanian to English.)**

LIETUVOS BALANSINIAI EKONOMINIAI RODIKLIAI 1987 m. (tesinys)

| | Vartojimas | | | Kaupimas | | | Kapitali- | Galuti- | Galutinis | Galutinis | Sunaudota | Pagaminta | Pagamintas | | |
|--|------------|-----------|-----------|----------|---------|----------|-----------|---------|-----------|-----------|-----------|-----------|------------|-----------|--------|
| | 032 | 033 | 034 | 035 | 036 | 037 | nis | nis | isvežimas | isvežimas | Saldo | respubli- | respubli- | | |
| | Viso | Asmeninis | visuomen. | Viso | agr. f. | lapyv.f. | peaontas | liai | - viso | (-) | (-) | koje | koje | produktas | |
| 001 Elektros ir šilumos energetika | 128.0 | 67.7 | 60.2 | | | | | | 128.0 | 149.1 | 99.6 | 49.5 | 508.5 | 558.0 | 177.5 |
| 002 Naftos gavybos produktai | | | | 87.7 | | | | | 87.7 | | 381.1 | -381.1 | 472.3 | 91.2 | -293.4 |
| 003 Naftos perdirbimo produktai | 146.0 | 81.8 | 64.2 | 185.2 | | | | | 185.2 | | | | | | |
| 004 Dujų pramonės produktai | 28.3 | 21.0 | 7.3 | .1 | | | | | 331.2 | 475.9 | 529.6 | -52.9 | 835.9 | 783.0 | 278.3 |
| 005 Anglis | 30.9 | 20.9 | 10.0 | 7.9 | | | | | 28.4 | 7.7 | 107.7 | -100.0 | 164.1 | 64.1 | -71.6 |
| 006 Durpės | 1.5 | 1.4 | .1 | 5.7 | | | | | 38.8 | | 51.6 | -51.6 | 57.2 | 5.6 | -12.8 |
| 007 Metalurgijos pramonės produkcija | 11.8 | 2.5 | 9.3 | 74.6 | | | | | 7.2 | 1.6 | | 1.6 | 17.5 | 19.1 | 8.8 |
| 008 Pagrindines chemijos produktai | 3.7 | .3 | 3.4 | 85.4 | | | | | 86.4 | 40.7 | 534.7 | -494.0 | 669.4 | 175.4 | -407.6 |
| 009 Sintetines smalos ir plastmasės | .3 | | .3 | -21.6 | | | | | 89.1 | 93.0 | 206.7 | -113.7 | 290.3 | 176.6 | -24.6 |
| 010 Kitų chemijos ir naftos chemijos pramonės šakų produktai | 155.0 | 135.0 | 20.0 | -37.3 | | | | | -21.3 | 32.9 | 81.3 | -48.4 | 85.9 | 37.5 | -69.7 |
| 011 Mašinų gamyba ir metalo apdirbimas | 534.8 | 474.7 | 60.0 | 969.1 | 276.3 | 692.8 | 739.2 | | 117.7 | 198.0 | 415.9 | -217.9 | 564.8 | 346.9 | -100.2 |
| 012 Baldai | 151.6 | 139.9 | 11.7 | -47.8 | 12.2 | -60.0 | 12.7 | | 2242.1 | 1650.9 | 2337.1 | -486.2 | 3939.5 | 3456.3 | 1755.9 |
| 013 Celiuliozės ir popieriaus pramonės produkcija | 17.9 | 14.6 | 3.3 | -18.9 | | | | | 116.5 | 83.7 | 20.6 | 63.1 | 164.0 | 227.1 | 179.6 |
| 014 Kita miško ir medžio apdirbimo pramonės produkcija | 17.5 | 4.9 | 12.6 | 32.1 | | | | | -1.9 | 138.5 | 80.2 | 58.3 | 165.1 | 223.4 | 57.4 |
| 015 Cementas ir asvesto-cemento gaminiai | 2.7 | 1.1 | 1.7 | 10.0 | | | | | | | 124.9 | -85.4 | 429.6 | | -35.8 |
| 016 Gelžbetoninės konstrukcijos ir gaminiai | 1.0 | .1 | .8 | -48.6 | | | | | 12.7 | 33.3 | 6.4 | 26.9 | 69.0 | 95.9 | 39.6 |
| 017 Kitos statybinės medžiagos | 23.5 | 4.7 | 18.8 | 33.6 | | | | | -47.7 | 7.2 | 5.1 | 2.1 | 225.0 | 227.1 | -45.6 |
| 018 Stiklo ir porceliano pramonės produktai | 32.1 | 30.5 | 1.6 | 2.1 | | | | | 57.1 | 26.5 | 29.5 | -3.0 | 396.6 | 393.6 | 54.1 |
| 019 Lengvosios pramonės produkcija | 1245.7 | 1206.2 | 39.5 | -243.7 | | | | | 34.2 | 11.8 | 49.4 | -37.6 | 73.2 | 35.6 | -3.4 |
| 020 Mėsa ir mėsos produktai | 602.7 | 570.6 | 32.1 | -361.7 | | | 1.6 | | 1003.7 | 1413.9 | 973.9 | 440.0 | 2881.3 | 3321.3 | 1443.7 |
| 021 Pienas ir pieno produktai | 295.1 | 268.2 | 26.9 | -4.6 | | | | | 241.1 | 398.3 | 5.1 | 393.2 | 714.9 | 1108.1 | 634.3 |
| 022 Kita maisto pramonės produkcija | 1727.4 | 1682.7 | 38.6 | -5.2 | | | | | 290.6 | 225.6 | 1.0 | 224.6 | 362.5 | 587.1 | 515.2 |
| 023 Kita pramonės produkcija | 182.3 | 108.3 | 74.1 | 113.4 | | | | | 1722.1 | 447.6 | 534.0 | -86.4 | 2786.4 | 2700.0 | 1635.7 |
| 024 Statyba | | | | 1103.6 | 1414.4 | -310.8 | 1297.9 | 44.9 | 319.5 | 81.2 | 166.4 | -85.2 | 557.9 | 470.2 | 234.4 |
| 025 Augalininkystės produktai | 285.6 | 277.2 | 8.5 | -43.3 | -1.4 | -42.0 | 3.3 | 39.2 | 2446.4 | | | | 2446.4 | 2446.4 | 2446.4 |
| 026 Gyvulininkystės produktai | 361.1 | 357.1 | 3.9 | 166.6 | 70.0 | 96.6 | 5.0 | 2.8 | 284.8 | 9.9 | 185.3 | -175.4 | 1844.5 | 1669.1 | 109.4 |
| 027 Transportas | 95.1 | | 95.1 | | | | | | 535.5 | 100.1 | 38.3 | 61.8 | 3330.4 | 3392.2 | 697.3 |
| 028 Ryšiai | | | | | | | | | 95.1 | | | | 728.5 | 728.5 | 95.1 |
| 029 Cirkuliacijos šakos | | | | | | | | 26.2 | 26.2 | | | | 36.9 | 36.9 | |
| 030 Kitų veiklos rūšių produktai | 65.6 | 44.5 | 21.1 | 20.4 | .5 | 19.8 | | | | | | | 814.7 | 814.7 | 26.2 |
| 031 Viso: | 6147.3 | 5522.1 | 625.2 | 2064.8 | 1772.0 | 292.8 | 2082.9 | 113.1 | 86.0 | 3.5 | 3.5 | | 146.2 | 146.2 | 86.0 |
| 032 Patalpų ir kitų neg.fondų amortizacija | 504.4 | 482.0 | 322.4 | | | | | | 10408.1 | 5870.4 | 6968.1 | -1097.7 | 25778.9 | 24681.2 | 9310.5 |
| 033 Viso mat.sąnaudų, išskaitant amortizaciją | 6651.7 | 5704.1 | 347.6 | | | | | | | | | | | | |

20

LIETUVOS BALANSINIAI EKONOMINIAI RODIKLIAI 1987 m. (tęsinys)

| | Statyba Augalininkystės produktai Gyvulininkystės produktai Transportas Ryšiai Cirkuliacijos šakos Kitų veiklos rūšių produktai Materialinių linių sąnaudų - viso | | | | | | | | | | | | | | |
|---|---|------|--------|---------|--------|--------|-------|--------|--------|--------|-------|------|-------|-------|---------|
| | 017 | 018 | 019 | 020 | 021 | 022 | 023 | 024 | 025 | 026 | 027 | 028 | 029 | 030 | 031 |
| 001 Elektros ir šilumos energetika | 17.0 | 1.7 | 28.7 | 7.1 | 9.9 | 14.9 | 9.3 | 21.4 | 11.1 | 21.6 | 27.3 | 1.2 | 19.9 | 1.7 | 380.6 |
| 002 Naftos gavybos produktai | | | | | | | | | | | | | | | 384.6 |
| 003 Naftos perdirbimo produktai | 21.1 | .1 | 3.9 | 2.4 | 3.1 | 26.2 | 3.0 | 27.8 | 45.2 | 17.7 | 80.4 | .6 | 5.5 | 1.2 | 504.7 |
| 004 Dujų pramonės produktai | 3.3 | 1.7 | .6 | .9 | .9 | 1.2 | .2 | 1.8 | .7 | 3.9 | 6.5 | | .6 | | 135.0 |
| 005 Anglis | 1.4 | | 1.1 | | 1.2 | .2 | .3 | 1.0 | 3.0 | 4.1 | 1.1 | .2 | 2.9 | .1 | 18.4 |
| 006 Dūrpės | .6 | | | | | | | .4 | 3.6 | 2.5 | | | | .2 | 10.3 |
| 007 Metalurgijos pramonės produkcija | 9.6 | 1.1 | 2.5 | 2.5 | 5.2 | 15.6 | 6.2 | 95.4 | 2.1 | 2.7 | 3.3 | .3 | .7 | .1 | 583.0 |
| 008 Pagrindinės chemijos produktai | .8 | 1.4 | 4.0 | .2 | .8 | 6.8 | 4.3 | 4.8 | 110.5 | .8 | 1.3 | | .2 | 1.5 | 201.2 |
| 009 Sintetinės saulos ir plastmasės | 1.0 | .9 | 5.2 | .4 | .3 | .2 | 3.1 | .9 | | | | | | | 107.2 |
| 010 Kitų chemijos ir naftos chemijos pramonės šakų produktai | 15.4 | .8 | 168.3 | 3.2 | 2.2 | 6.7 | 9.4 | 27.1 | 11.1 | 5.3 | 18.9 | .1 | 3.0 | 1.7 | 447.1 |
| 011 Mašinų gamyba ir metalo apdirbinas | 16.4 | .9 | 22.2 | 4.5 | 5.9 | 41.9 | 8.7 | 189.6 | 111.3 | 52.4 | 21.0 | .8 | 13.1 | 3.7 | 1697.4 |
| 012 Baldai | .5 | | .8 | .1 | .1 | .3 | .5 | 6.5 | | .1 | .3 | .1 | 2.6 | .6 | 47.5 |
| 013 Celiuliozės ir popieriaus pramonės produkcija | 4.8 | .1 | 6.8 | 1.5 | 5.2 | 16.8 | 12.3 | 6.2 | .1 | .4 | .4 | .1 | 5.8 | 10.8 | 166.0 |
| 014 Kita miško ir medžio apdirbimo pramonės produkcija | 8.7 | 1.4 | 2.5 | 3.7 | 1.7 | 21.9 | 6.3 | 137.3 | 1.8 | 3.3 | 3.0 | .1 | 2.7 | .5 | 379.9 |
| 015 Cementas ir asbesto-cemento gaminiai | 10.0 | | .2 | | .1 | .1 | .1 | 15.6 | 1.3 | 4.1 | .2 | | .3 | | 56.3 |
| 016 Gelžbetoninės konstrukcijos ir gaminiai | .2 | | .1 | | | .4 | | 266.2 | .3 | 1.3 | .3 | | | | 272.7 |
| 017 Kitos statybinės medžiagos | 55.9 | .1 | 1.5 | .2 | .6 | 1.6 | .6 | 204.3 | 2.9 | 9.0 | 17.3 | | 1.5 | 1.4 | 339.5 |
| 018 Stiklo ir porceliano pramonės produktai | .2 | 1.5 | .3 | | 1.5 | 4.8 | .9 | 5.6 | .1 | .7 | .2 | | 3.4 | | 38.9 |
| 019 Lengvosios pramonės produkcija | 4.7 | .2 | 1654.3 | 2.9 | 2.1 | 15.8 | 77.6 | 12.7 | 7.8 | 12.1 | 4.2 | .2 | 9.3 | 3.4 | 1877.6 |
| 020 Mėsa ir mėsos produktai | .1 | | 30.5 | 396.9 | 1.9 | 33.7 | 3.0 | 1.7 | | 3.0 | | | 2.8 | | 473.8 |
| 021 Pienas ir pieno produktai | .5 | | .7 | .9 | 8.9 | 20.7 | .4 | .7 | | 32.0 | | | 1.3 | | 72.0 |
| 022 Kita maisto pramonės produkcija | .2 | | 2.0 | 3.1 | 14.8 | 633.2 | 5.6 | .5 | .5 | 388.7 | .1 | | 7.4 | | 1064.2 |
| 023 Kita pramonės produkcija | 1.7 | .1 | 8.0 | 2.8 | 4.7 | 62.8 | 49.8 | 4.4 | 17.2 | 23.8 | 2.3 | .2 | 4.6 | 14.9 | 238.4 |
| 024 Statyba | | | 30.8 | .3 | .2 | 539.0 | .3 | 3.1 | 218.8 | 763.0 | | | 3.2 | .5 | 1559.7 |
| 025 Augalininkystės produktai | | | 39.7 | 1564.9 | 979.6 | 10.1 | 5.6 | | 15.7 | 119.1 | | | .1 | | 2794.9 |
| 026 Gyvulininkystės produktai | | | 12.9 | 7.1 | 1.5 | 82.4 | 41.0 | 26.5 | 17.6 | 7.1 | | | | | 633.4 |
| 027 Transportas | 84.3 | .4 | 3.0 | .4 | .5 | 2.1 | 1.4 | 4.0 | 1.3 | 2.4 | 2.4 | | | .8 | 36.9 |
| 028 Ryšiai | 2.0 | .1 | | | | | | | | | | | | | 788.5 |
| 029 Cirkuliacijos šakos | 2.6 | .7 | 122.5 | 83.5 | 32.7 | 189.7 | 29.7 | | 70.9 | 44.9 | | | 3.4 | .6 | 36.9 |
| 030 Kitų veiklos rūšių produktai | .6 | .1 | 2.1 | .1 | .2 | 4.8 | 3.1 | 2.4 | .3 | .4 | 3.3 | .7 | 10.6 | .3 | 60.2 |
| 031 Viso materialinių sąnaudų | 263.7 | 13.5 | 2155.1 | 2089.8 | 1085.8 | 1754.2 | 282.8 | 1128.7 | 655.2 | 1586.3 | 194.2 | 4.6 | 105.0 | 47.2 | 15370.8 |
| 032 Amortizacija | 30.1 | 3.0 | 55.7 | 11.1 | 18.9 | 100.5 | 32.8 | 144.3 | 247.6 | 193.0 | 175.7 | 6.9 | 64.2 | 8.4 | 1578.5 |
| 033 Viso mat.sąnaudų, įskaitant amortizaciją | 293.8 | 16.4 | 2210.8 | 2101.0 | 1104.7 | 1854.7 | 315.6 | 1273.0 | 902.8 | 1779.3 | 369.9 | 11.5 | 169.2 | 55.6 | 16949.3 |
| 034 Grynoji produkcija iš jos: | 99.8 | 19.2 | 1110.4 | -992.9 | -517.6 | 845.3 | 154.6 | 1173.4 | 766.3 | 1612.9 | 358.6 | 25.4 | 645.5 | 90.6 | 7732.0 |
| 035 darbo užmokestis ir kitos piniginės išmokos, prilygstančios darbo užmokesčiui | 61.9 | 8.7 | 252.0 | 26.9 | 33.2 | 145.0 | 72.7 | 310.0 | 621.2 | 1005.2 | 229.0 | 13.3 | 279.9 | 63.1 | 4619.9 |
| 036 pelnas, bendrasis akcizas ir kiti grynyųjų pajamų elementai | 37.9 | 10.4 | 858.4 | -1019.8 | -550.8 | 700.3 | 81.9 | 253.4 | 145.1 | 607.7 | 129.4 | 12.1 | 365.6 | 27.5 | 3112.0 |
| 037 Visa produkcija | 393.6 | 35.6 | 3324.3 | 1108.1 | 587.1 | 2700.0 | 470.2 | 2446.4 | 1669.1 | 3392.2 | 728.5 | 36.9 | 814.7 | 146.2 | 24681.2 |

PRODUKCIJA

| | 001 | 002 | 003 | 004 | 005 | 006 | 007 | 008 | 009 | 010 | 011 | 012 | 013 | 014 | 015 | 016 |
|---|-------|------|-------|------|-----|------|-------|-------|------|-------|--------|-------|-------|-------|------|-------|
| 001 Elektros ir šilumos energija | 4.0 | | 17.8 | | | | | | | | | | | | | |
| 002 Naftos gavybos produktai | | | 383.3 | | | .6 | 1.1 | 19.6 | 5.2 | 11.9 | 61.6 | 3.8 | 7.8 | 12.7 | 8.7 | 12.8 |
| 003 Naftos perdirbimo produktai | 150.2 | | 1.5 | | | | | | | | .2 | | | .1 | | |
| 004 Dujų pramonės produktai | 69.1 | | | | | .9 | .4 | 3.6 | .6 | 3.6 | 16.8 | 1.6 | 1.3 | 6.4 | 18.0 | 1.9 |
| 005 Anglis | | | | | | | .2 | 26.1 | 4.3 | .1 | 7.3 | .4 | 2.1 | 1.6 | 1.2 | 1.0 |
| 006 Durpės | | | | | | | | | | | .3 | .2 | .2 | .5 | .1 | .2 |
| 007 Metalurgijos pramonės produkcija | .2 | | | | | 2.7 | | | | | | | | | | |
| 008 Pagrindinės chemijos produktai | 2.1 | | .3 | | | .2 | 22.8 | 2.3 | .3 | 6.3 | 353.1 | 3.3 | 1.2 | 3.4 | 2.1 | 38.3 |
| 009 Sintetinės šėalos ir plastmasės | 1.1 | | | | | | .3 | 15.5 | 2.6 | 10.7 | 31.4 | | 1.1 | .6 | .1 | .3 |
| 009 Kitų chemijos ir naftos chemijos pramonės šakų produktai | .6 | | | | | .1 | | 3.1 | 1.6 | 59.0 | 19.9 | 2.5 | 1.6 | 6.3 | | .2 |
| 010 Kitų chemijos ir naftos chemijos pramonės šakų produktai | 1.3 | | 3.1 | | | .4 | .1 | 29.4 | 11.1 | 34.5 | 72.4 | 9.0 | 4.2 | 5.9 | .7 | 1.7 |
| 011 Mašinų gamyba ir metalo apdirbimas | 20.3 | | 1.4 | | | 1.2 | 1.2 | 5.6 | .6 | 7.0 | 1109.9 | 18.0 | 4.0 | 18.8 | 6.3 | 10.6 |
| 012 Baldai | .4 | | .1 | | | | | .2 | | 1.1 | 19.1 | 10.2 | | 3.7 | | .2 |
| 013 Celiuliozės ir popieriaus pramonės produkcija | .1 | | .2 | | | | | 1.7 | .3 | 2.6 | 12.7 | 2.8 | 70.8 | 3.3 | .1 | .2 |
| 014 Kita miško ir medžio apdirbimo pramonės produkcija | .3 | | .2 | | | .1 | .7 | .3 | | 2.3 | 44.4 | 40.8 | 14.3 | 78.1 | .1 | 3.4 |
| 015 Cementas ir asbesto-cemento gaminiai | | | | | | | | | | .1 | .9 | | | .3 | .7 | 22.0 |
| 016 Gelžbetoninės konstrukcijos ir gaminiai | .6 | | | | | | | | | | .8 | .3 | | .4 | | 1.5 |
| 017 Kitos statybinės medžiagos | .2 | | | | | | | | | | | | | | | |
| 018 Stiklo ir porceliano pramonės produktai | .1 | | .1 | | | .1 | .1 | .4 | | .4 | 6.8 | .3 | .8 | 1.2 | 6.8 | 25.5 |
| 019 Lengvosios pramonės produkcija | 1.8 | | .4 | | | .2 | .4 | .4 | | 15.5 | 22.5 | 17.0 | 3.2 | 7.5 | .2 | 1.2 |
| 020 Mėsa ir mėsos produktai | | | | | | | | | | | .1 | | | .1 | | |
| 021 Pienas ir pieno produktai | .1 | | .1 | | | | | .2 | | .3 | 4.1 | .2 | .1 | .3 | .1 | .3 |
| 022 Kita maisto pramonės produkcija | 1.0 | | | | | | | | | | | | | | | |
| 023 Kita pramonės produkcija | 26.0 | | | | | .1 | .1 | .2 | | 4.5 | 2.0 | | .2 | .1 | | .1 |
| 024 Statyba | | | | | | | | | | .4 | 10.8 | .4 | .7 | 1.9 | .1 | .6 |
| 025 Augalininkystės produktai | | | | | | | | | | | | | | | | |
| 026 Gyvulininkystės produktai | | | | | | | | | | | | | | .4 | | .1 |
| 027 Transportas | | | | | | | | | | | | | | | | |
| 028 Rvšiai | .4 | 91.2 | 3.5 | 64.1 | 5.4 | 2.1 | 88.4 | 19.7 | .2 | 2.4 | 30.6 | 1.2 | 4.4 | 12.6 | 6.5 | 19.3 |
| 029 Cirkuliacijos šakos | 1.4 | | | | | .1 | .2 | .2 | | .5 | 7.3 | .5 | .2 | 1.7 | .1 | 1.0 |
| 030 Kitų veiklos rūšių produktai | .2 | | 44.6 | | .3 | | 14.0 | 19.7 | 1.8 | 12.7 | 95.8 | 7.3 | 2.5 | 5.7 | 3.6 | .1 |
| 031 Viso materialinių sąnaudų | 281.6 | 91.2 | 456.8 | 64.1 | 5.6 | 8.7 | 149.3 | 150.2 | 29.0 | 176.5 | 1968.3 | 124.2 | 121.6 | 178.9 | 56.0 | 142.8 |
| 032 Amortizacija | 118.0 | | 16.6 | | | 4.7 | 4.1 | 39.1 | 1.3 | 14.5 | 210.7 | 9.3 | 10.2 | 27.6 | 9.3 | 21.7 |
| 033 Viso mat.sąnaudų, įskaitant amortizaciją | 399.6 | 91.2 | 473.4 | 64.1 | 5.6 | 13.4 | 153.4 | 189.3 | 30.3 | 191.0 | 2474.0 | 132.5 | 131.8 | 206.5 | 65.3 | 164.5 |
| 034 Grynoji produkcija | 158.4 | | 309.6 | | | .7 | 22.0 | 12.7 | 7.2 | 155.9 | 1277.2 | 94.6 | 91.6 | 137.6 | 30.6 | 62.6 |
| 034 iš jos: | | | | | | | | | | | | | | | | |
| 035 darbo užmokestis ir kitos piniginės išmokos, prilygstančios darbo užmokesčiui | 37.5 | | 6.0 | | | 3.5 | 7.7 | 16.5 | 1.1 | 39.2 | 593.3 | 45.1 | 20.4 | 78.9 | 8.0 | 44.4 |
| 036 pelnas, bendrasis akcizai ir kiti grynujų pajamų elementai | 121.0 | | 303.6 | | | 2.2 | 14.4 | 29.2 | 6.1 | 116.7 | 683.9 | 49.5 | 71.2 | 58.7 | 22.6 | 18.2 |
| 037 Visa produkcija | 558.0 | 91.2 | 783.0 | 64.1 | 5.6 | 19.1 | 175.4 | 176.6 | 37.5 | 346.9 | 3456.3 | 227.1 | 223.4 | 344.2 | 95.9 | 227.1 |

X_{ij}
 $i=30$
 $j=30$

Am

d
p
X

$$(A_m + d + p) / X (E - A)^{-1} = y^0$$

$$(A_m + d + p)' / X (E - A)^{-1} = y^1$$

$$y^0 = (1, 1, \dots, 1)$$

$$a_{ij} = \frac{x_{ij}}{x_j}$$

Appendix P
Output of 30 Sector IO Model Analysis

**(In the interest of timeliness this Appendix has not been translated
from Lithuanian to English.)**

| | A | B | C | D |
|----|---------------------|--|----------|-------|
| | P R O D U K C I J A | | | |
| | | | | 001 |
| 7 | | | | |
| 8 | | | | |
| 9 | | | | |
| 10 | | | | |
| 11 | 001 | Elektros ir _ilumos energetika | 25 | 4.0 |
| 12 | 002 | Naftos gavybos produktai | 2.158665 | |
| 13 | 003 | Naftos perdirbimo produktai | 2.142673 | 150.2 |
| 14 | 004 | Dujų pramonys produktai | 2.158665 | 69.1 |
| 15 | 005 | Anglis | 2.136809 | |
| 16 | 006 | Durpys | 2.218784 | .2 |
| 17 | 007 | Metalurgijos pramonys produkcija | 2.019280 | 2.1 |
| 18 | 008 | Pagrindinis chemijos produktai | 4.761649 | 1.1 |
| 19 | 009 | Sintetinis smalos ir plastmasys | 5.474568 | .6 |
| 20 | 010 | Kitų chemijos ir naftos chemijos pramonys _akų produktai | 3.026742 | 1.3 |
| 21 | | | | |
| 22 | 011 | Mašinų gamyba ir metalo apdirbimas | 2.230625 | 20.3 |
| 23 | 012 | Baldai | 2.111767 | .4 |
| 24 | 013 | Celiuliozys ir popieriaus pramonys produkcija | 2.584413 | .1 |
| 25 | | | | |
| 26 | 014 | Kitų mašinos ir medžiagos apdirbimo pramonys produkcija | 2.555145 | .3 |
| 27 | | | | |
| 28 | 015 | Cementas ir asbesto-cemento gaminiai | 3.686721 | |
| 29 | 016 | Gelžbetoninis konstrukcijos ir gaminiai | 3.172820 | .6 |
| 30 | | | | |
| 31 | 017 | Kitos statybinis medžiagos | 2.897735 | .2 |
| 32 | 018 | Stiklo ir porceliano pramonys produktai | 2.708227 | .1 |
| 33 | | | | |
| 34 | 019 | Lengvosios pramonys produkcija | 1.770136 | 1.8 |
| 35 | 020 | Masa ir masos produktai | 2.427277 | |
| 36 | 021 | Pienas ir pieno produktai | 2.348374 | .1 |
| 37 | 022 | Kitų maisto pramonys produkcija | 1.635293 | 1.0 |
| 38 | 023 | Kitų pramonys produkcija | 2.083679 | 26.0 |
| 39 | 024 | Statyba | 1.941506 | |
| 40 | 025 | Augalininkystys produktai | 1.692097 | |
| 41 | 026 | Gyvulininkystys produktai | 1.479180 | |
| 42 | 027 | Transportas | 2.158665 | .4 |
| 43 | 028 | Ryšiai | 1.820987 | 1.4 |
| 44 | 029 | Cirkuliacijos _akos | 1.671621 | |
| 45 | 030 | Kitų veiklos rūšių produktai | 1.672922 | .2 |

54