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Review of Lithuanian National Energy Strategy

Energy Tariff Implementation Project

June 1998

Prepared for

**United States Agency for International Development
State Control Commission of Prices for Energy Resources and of Energy
Activities in Lithuania**

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**Regulatory Reform and Energy Sector Restructuring in
Central and Eastern Europe and the Baltics**

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Review of Lithuanian National Energy Strategy

I. Introduction

The Lithuanian Energy Institute has developed an energy strategy for Lithuania under contract with the Ministry of Economy. The is contained in the report "National Energy Strategy" (second draft), May 1998. This will be referred to as the "NES Paper". Bechtel Consulting has been asked to review this document. This report summarizes our comments. Some of our comments refer to specific sections of the report. The Table of Contents of the NES Paper is shown below for the convenience of the reader.

National Energy Strategy Paper Table of Contents

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This review was conducted under assistance provided by the US Agency for International Development (USAID) under its contract, Regulatory Reform and Energy Sector Restructuring in Central and Eastern Europe and the Baltics (Contract No. DHR-0030-C-00-5016-00). This assistance is directed toward the National Control Commission of Prices for Energy Resources and Energy Activities, or the "NCC". Goals of this assistance include support to assist with estimating the financial requirements of the energy system, developing energy cost allocation methods, introducing new market based energy pricing concepts, developing tariff design and new mechanisms to alleviate the impact of tariff increases on sensitive customer groups, and improve public understanding and participation in regulation of the energy tariff setting process.

Our comments are divided into the following categories

- Overall comments
- Energy forecasts
- Power sector development
- Heat supply
- Energy conservation
- Legal and institutional reforms

II. Overall Comments

- 1 This is a comprehensive document covering all aspects of energy, including legal and institutional issues, training, and environmental issues as well as all sectors of energy supply and use. It effectively highlights the main directions and major problem areas for the Lithuanian energy sector. In some cases it goes beyond broad strategies and directions to provide some details of implementation which provide support to the stated strategies.
- 2 However, in some cases, there is insufficient information to support some broad general statements in key strategic areas, particularly in the power sector, and there appear to be several inconsistencies which raise doubts about the validity of some statements. Some of these are discussed further below. In general, the document should be self-contained by providing a clear basis for key calculated figures and strategy statements.
- 3 The energy strategy objectives stated in Section 1 are important statements of direction and most of them are generally addressed in the document. However, the objective of regional cooperation and collaboration is touched on only briefly throughout the document (except in the discussions of natural gas and oil supply), even when regional cooperation is an important part of the strategy, such as exporting power and providing adequate reserve margins. We recommend a greater emphasis on regional cooperation and solutions to energy challenges.
- 4 The expected use of the document is hinted at in the second paragraph of the Final Conclusions section (page 45) which suggests that this is only a draft strategy to provide a basis for discussion in the government and the Seimas before a final plan is adopted. If so, then the document should provide a clearer basis for such discussions and decision-making.
- 5 Throughout the NES Paper there are statements addressing problems in performing analyses and problems in properly managing the energy sector as a result of the shortcomings in the accounting and reporting systems. We agree that there are shortcomings in the current systems and we suggest that in the near future the energy enterprises work with the NCC to improve the current methods. The improved system will facilitate activities towards achieving several of the aims of the strategy.
- 6 The NES Paper provides estimates of costs of operations and future investments in the various areas of the energy sector in Lithuania. However, the strategy should also present total costs and investments for some of the scenarios considered. This would highlight the relative importance of the different energy areas and a look at the total investments which

will be required would illustrate why it is important to attract private investments. Some examples of the total figures which could be provided are

- 1997 total expenditures on electricity, natural gas and district heat broken down by fuel type and by class
 - 2003 total expenditures on electricity, natural gas and district heat broken down by fuel type and by class. This would be two scenarios, one with the retirement of Ignalina Unit 1 and one without the retirement. These scenarios would also include total investments in the three infrastructures and in conservation measures
 - 2010 total expenditures on electricity, natural gas and district heat broken down by fuel type and by class. This would be two scenarios, one with the retirement of Ignalina Units 1 and 2 and one without the retirements. These scenarios would also include total investments in the three infrastructures and in conservation measures
7. There are several figures and tables in the NES Paper addressing projections of various items. It would be helpful to include information on the associated level of annual percentage change. If this would over burden the report, this information should be included in an appendix.

III. Energy Forecasts

These comments refer to Sections 3 and 4 of the NES Paper

1. The trend of GDP shown in Figure 2.1 (with a low of about 40% of 1990 value in 1993 and 1994) does not agree with the text (56% in 1994) or with Figure 3.1
2. Figure 4.4 is somewhat confusing since it includes Electricity and Heat along with primary fuel sources. Presumably the fuels used to produce electricity and heat are deducted from the primary fuel amounts shown.

IV. Power Sector Development

These comments refer to Section 5.1 of the NES Paper

1. The status and future of the Ignalina NPP is the key issue facing the Lithuanian power sector, but the strategy document does not provide a clear picture of the alternatives and their consequences and a sound basis for informed decision making. Certainly there are many compelling reasons for continuing to operate Ignalina (economic generation, environmental, shutdown costs, impact on the economy, etc.) but these must be evaluated objectively against the alternatives. Because of the uncertainties, it is reasonable, as the report does, to include two scenarios for Ignalina (shutdown of Unit 1 in 2005 and Unit 2 in 2010, and continued operation of both units throughout the planning period). However, there is insufficient information presented to compare the scenarios and the alternative power sources. The reference to previous studies for this information is not sufficient for such an important issue in such a key document.

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- 2 The key issue for Ignalina is its perceived safety and the required safety upgrades as determined by responsible regulators and international nuclear safety agencies. The statement on page 20 concerning safety ("The safety analysis conducted in 1995-1997 proved that after implementation of all safety upgrades recommended in the report the lifetime of the reactors is not restricted by the safety issues ") appears to be somewhat of an overstatement (safety is rarely "proved") But even if it isn't, it is necessary to provide more supporting information and to indicate the status of the upgrades, implementation schedule, and cost
- 3 Several statements are made concerning improvements and additional expenditures which will be required for Ignalina, including safety upgrades (mentioned above), fuel channel replacement, spent fuel storage, long-term fuel supply, nuclear waste disposal, and decommissioning Presumably the last two items would require a surcharge on Ignalina power generation costs (which is used as an argument for continued operation) It is not clear whether these costs have been included in the estimated total generating costs or how they would affect the total costs of the various alternatives Without this information it is not possible to verify the statement "the cheapest source of electricity production is Ignalina NPP" (second bullet on page 20) or the relative cost figures for the two scenarios (bottom of page 20 and top of page 21)
- 4 In the Final Conclusions section it is stated that more complete information about the operating time without rechanneling and the safety and reliability of Ignalina will be available in 1999 after a license is issued to Unit 1, and that this will make it possible "to determine the programme of action for all energy sector more precisely " This emphasizes the need to clearly define the key issues and the information required to make decisions on Ignalina and when the information will be available It also suggests that there should be a major update of the Energy Strategy document in 1999
- 5 Two scenarios for Ignalina are considered in the NES Paper In the first, the two Ignalina units are shut down in 2005 and 2010, respectively, 20 years after commissioning In the second, fuel channels are replaced and their life is extended by another 15 years Figures are then presented to support extending the life of Ignalina The method of calculating the savings associated with rechanneling are not given, nor are the references to more detailed study It is not clear whether the stated savings are net of the investment required and key assumptions, such as the cost of replacement fuel and capacity are not given
- 6 Figure 4.6 a) refers to both units of Ignalina being decommissioned in 2010 whereas Option 1 is defined in the text as Unit 1 shutdown in 2005 and Unit 2 in 2010
- 7 Most of the results provided to estimate the value of continued operation of Ignalina appear to be in the form of references to other studies These references are either very brief or non-existent When references are made they do not provide sufficient information to understand the depth of analysis that has been conducted that it is clear that the material being referenced should be considered in establishing the energy strategy If these other studies are to be key items in considering the continued use of the plant, they should be incorporated into the NES

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- Paper as appendixes (with appropriate translations) and should be part of the overall topics of discussion
- 8 The NES Paper should provide tables showing the projected costs of generation from Ignalina NPP and from the alternative sources, the method of estimating these costs, and the key cost assumptions used
 - 9 Reference is made to the financing costs of the safety improvements defined in the safety improvement program in the life extension option. However, no information on these costs, or how they will be financed is included. This information should be made a part of the NES Paper
 - 10 Within the report there are figures provided for the estimated cost of many of the options available within the energy sector. However, very little data is provided concerning the operation of the Ignalina power plant even though these represent some of the largest costs to be encountered
 - 11 The statement (third bullet page 20) that “the huge amounts of reserve capacities can be satisfied by co-operation with neighboring countries ”etc requires further elaboration since it addresses one of the unique characteristics of the Lithuanian power system and has important strategic implications. The document should describe, for example, the interconnections and agreements with neighboring countries (or other provisions) for seasonal and spinning reserves to cover an outage of an Ignalina unit, cooperative regional planning programs, possible future interconnections, and associated costs and other impacts on power sector strategy
 - 12 Several statements about the export market (fourth bullet page 20, three bullets on page 23) appear to be somewhat inconsistent and do not adequately address an important part of the strategy, i.e., to productively use some of the surplus capacity. Furthermore, Table 2.1 indicates that exports are already a significant part of total generation. The potential markets (other Baltic countries, FSU, the West, the Baltic Ring, etc.) should be identified and the competitiveness of Lithuanian power in those markets should be discussed. Construction of a transmission line to Poland is currently planned, and it is stated that this line is “necessary and urgent” but that it will payback only if exports are “not lower than 6 TWh beyond 2010”. If this is so, this (and other) potential exports and the required generation and transmission capability should be included in the plan. For example, it is stated that increasing the capacity of Kruonis HPPS is required if there is an export market, presumably a major expense that would have to be identified in the plan
 - 13 Several statements are made about use of the Lithuanian power plant, modifications to burn different fuels, “modernisation”, etc. which do not appear to present a clear strategy for the plant or provide comparable cost estimates or other bases for deciding among various options. A major existing asset such as this should be specifically addressed in any strategy, certainly before or in addition to considering any new facilities, since it is usually much cheaper to upgrade existing facilities than to build new ones. In fact, a parenthetical statement (top of page 23) states that if fuel prices stayed at present levels modernisation of

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the Lithuanian power plant is a more attractive alternative than a new CCGT, yet the plan (page 22) suggests a that new CCGT would be cheaper. Table 5.5.1 gives estimated generating costs for the plant, a CCGT, and other options but it is not obvious what is included in these costs or that the costs are comparable. It is stated that the plant is under reconstruction to burn orimulsion, yet the Environmental Strategy (Section 6) plans fuel taxes on HFO and orimulsion to create incentives to used natural gas instead of “polluting fuels”. Before informed decisions can be made in this area, a comprehensive analysis is needed of the cost of various fuels, the cost of upgrades or new facilities required to burn them, and the environmental impacts. These results also are important in the strategies for Supply of Natural Gas (section 5.3) and for Development of the Oil Sector (section 5.4).

- 14 It is mentioned that the electrical transmission and distribution networks are not sufficiently efficient, are outdated and need modernization. The only significant statement concerning electrical transmission and distribution beyond this point are concerning the addition of interconnections with countries to the West of Lithuania. The strategy should include additional information about potential necessary investments in the transmission and distribution systems in Lithuania, including the scope of the needs and alternatives for sources of the investments.
- 15 In the section dealing with electricity export issues, the statement is made that construction of the transmission line to Poland will have a positive payback only if the export potential is not lower than 6 TWh beyond 2010. There is no data given to support this statement. The data used to make this calculation should be provided in the NES Paper.
- 16 In the section addressing the reliability of electric supply there is a reference to the long-term fuel reserve for Ignalina NPP. However, no information is provided on arrangement for fuel for Ignalina. A discussion of the supply options available for Ignalina should be added to this section of the NES Paper.
- 17 At the end of Section 5.1 there are several items presented as being important to producing the least cost for power supply. These statements include the continued use of Ignalina, preserving the Lithuanian Power Plant and using the Kruonis hydro pumped storage plant in week regulation regime. The data in the NES Paper is not sufficient to support these statements. Sufficient data to evaluate these statements should be included in the strategy.
- 18 This least cost recommendations area at the end of section 5.1 recommends the establishment of an independent party to establish purchase schedules from the competing power generators. It also recommends the implementation of an improved system of accounting and statistical reporting. We strongly agree with these two recommendations.

V. Heat Supply

The following comments refer to Section 5.2

- 1 The NES Paper makes the statement that “with respect to income, heating expenses have reached socially dangerous levels”. The strategy also makes references to problems with data in the heating sector and a “hardly explainable growth of losses”. These two statements

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together illustrate that it is extremely important that there be improvements in accounting and reporting in the heating sector in order to provide accurate management information to the heating enterprises and to the Lithuanian government

- 2 One of the reasons given by the NES Paper for the situation in district heating is the thermal insulation characteristics of the heat consumption sites. The strategy states, "Very large investments are needed for the essential improvement of the situation with the repayment period exceeding 20 years in most cases." We agree that investments are needed. However, we disagree that all of these are large investments requiring long pay-back periods. There have been other areas to experience a catch-up of investments in conservation after a large increase in energy prices. The experience in these areas has been that there are numerous low cost and no cost conservation measures which can be implemented. Given the importance of decreasing the cost of providing the district heating service, the NES Paper should provide a broader discussion of the conservation measures which are available and alternative methods for encouraging and financing conservation investments.
- 3 The NES Paper states in the final area of Section 5.2 that the substitution of other fuels for district heating should only be considered in exceptional cases. We do not have information that contradicts this statement. However, the strategy should provide additional information supporting this statement. Given the very large investments necessary in the heating sector, additional analyses should be performed to determine if fuel substitution might be the lower cost alternative on a broader scale.
- 4 The main strategy for improving the system (and also to produce electricity "which could compete with the power price from Ignalina NPP") appears to be to introduce new small CHP plants operating on natural gas. But it is not clear how these new plants will be financed if the current system loses money and consumers are unable to absorb further increases.
- 5 It is stated (#2 page 26) that high transmission losses in the centralized heating networks are increasing the cost of heat much above that paid by unconnected consumers, but none of the alternatives considered in the NES Paper appear to address this problem. We recommend that alternatives and their costs be discussed in the NES paper.

VI. Energy Conservation

These comments refer to the energy conservation impact discussion in Section 4 and Section 5.6 of the NES Paper.

- 1 Notwithstanding the excess capacity situation, it is prudent of the government to embark on programs of energy efficiency. It correctly reasons that a history of low energy prices have encouraged wasteful consumption. Consumers must, therefore, be encouraged to conserve energy, particularly as their consumption must be brought into line with their ability to pay increasing rates for energy.
- 2 Within the section evaluating the impact of energy conservation (Section 4) there is the statement, "at present more realistic are measures which need lower investments and have a

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shorter pay-back period” However, the strategy does not provide any information on the projected energy savings within various payback periods Such information would be helpful in evaluating energy savings versus supply side alternatives

- 3 The NES Paper refers to a high level of savings from energy efficiency and a basic level of savings However, no specifics are given to evaluate the differences between these two levels This makes it difficult to evaluate the acceptability of the use of these two levels in the study For example, there is not any information on the differences in the total costs of the investment between the two levels
- 4 The NES Paper recommends the stimulation of the establishment of energy service companies (ESCOs) as a means of carrying out the needed activities in conservation measures in the heating sector We strongly agree with this recommendation ESCOs could play a significant role in a number of areas in the Lithuanian energy sector
- 5 The NES Paper suggests that the greatest potential energy savings exist in the household, trade and service sectors Insulation and modernized heating systems are important, of course, but the accompanying table appears to illustrate that this may not be the most cost-effective way of achieving energy savings If we understand the table correctly, dwellings account for 37.4 PJ in total potential savings, but at a cost of 22.0 billion Litas A similar savings -- 32.4 PJ -- could be achieved from all other sectors for a cost of only 5.9 billion Litas

VII. Legal and Institutional Reforms

- 1 The NES Paper provides guidelines for future reforms required for electricity, natural gas and district heating, as well as some common principles for future reforms in all three subsectors
- 2 The proposed reforms for the power subsector follow worldwide trends toward unbundling of services, facilitating private investment, increasing competition in generation and price cap regulation for transmission and distribution These reforms should all generally contribute to USAID’s Intermediate Result 1.5.2 Pricing, Regulatory Reform and Restructuring to Promote Investment However, while the proposed reforms indicate movement in the right direction, the details may be difficult to implement, and our comments should not be taken as a blanket endorsement
- 3 For example, in one of the few details presented, mention is made of breaking off distribution into seven separate distributors Given the total country demand of around 7 TWh, it seems questionable whether seven distributors could be economically and commercially viable Since one of the main goals is the attraction of private capital, information from the financial community should be examined before determining the number of distribution companies
- 4 Reform proposals for the gas subsector follow those of the power sector in calling for greater competition where possible, third party access to transmission and price cap regulation for transmission and distribution services We concur with the general direction implied by the proposals However, the implications of some of the more detailed proposals (e.g.,

FACSIMILE COVER PAGE

To Howard Menaker
Sent 1998 06 16 at 15 37 26
Subject

From Jim Strangways
Pages 5 (including Cover)

These are my final comments This is the same as the version that I E-Mailed late last night with one comment added at the end This version has also been sent via E-Mail

COPY

Within the report there are figures provided for the estimated cost of many of the options available within the energy sector. However, very little data is provided concerning the operation of IAE, even though this are some of the largest costs to be encountered.

Throughout the strategy there are several statements addressing problems in performing analyses and problems in properly managing the energy sector as a result of the shortcomings in the accounting and reporting systems. We agree that there are shortcomings in the current systems and we suggest that in the near future the energy enterprises work with the NCC to improve the current methods. The improved system will facilitate activities towards achieving several of the aims of the strategy.

Within the section evaluating the impact of energy conservation there is the statement, 'at present more realistic are measures which need lower investments and have a shorter pay-back period.' However, the strategy does not provide any information on the projected energy savings within various payback periods. Such information would be helpful in evaluating energy savings versus supply side alternatives.

The strategy refers to a high level of savings from energy efficiency and a basic level of savings. However, no specifics are given to evaluate the differences between these two levels. This makes it difficult to evaluate the acceptability of the use of these two levels in the study. For example, there is not any information on the differences in the total costs of the investment between the two levels.

There are several figures and tables in the strategy addressing projections of various items. It would be helpful to include information on the associated level of annual percentage change. If this would over burden the report, this information should be included in an appendix.

In Section 5.1 of the strategy, it is mentioned that the electrical transmission and distribution networks are not sufficiently efficient, are outdated and need modernization. The only significant statement concerning electrical transmission and distribution beyond this point are concerning the addition of interconnections with countries to the West of Lithuania. The strategy should include additional information about potential necessary investments in the transmission and distribution systems in Lithuania.

Section 5.1 also deals with the continued operation/closure of the Ignalina NPP. Most of the information in this section is in the form of references to other studies. These references are very brief and do not provide sufficient information that it is clear that the material being referenced should be considered in establishing the energy strategy. The fate of the Ignalina NPP is one of the main

questions facing Lithuania. If these other studies are to be key items in considering the continued use of the plant, they should be incorporated into the strategy as appendixes (with appropriate translations) and should be part of the overall topics of discussion.

Figures are provided in Section 5.1 on the economic impacts of closing the Ignalina NPP. However, the data behind the figures are not provided. The strategy should provide tables showing the projected costs of generation from Ignalina NPP and from the alternative sources.

Reference is made in Section 5.1 to the financing costs of the safety improvements defined in the safety improvement program number 2. However, no information on these costs, or how they will be financed is included. This information should be made a part of the strategy.

In the section dealing with electricity export issues, the statement is made that construction of the transmission line to Poland will have a positive payback only if the export potential is not lower than 6 TWh beyond 2010. There is no data given to support this statement. The data used to make this calculation should be provided in the strategy.

In the section addressing the reliability of electric supply there is a reference to the long-term fuel reserve for Ignalina NPP. However, no information is provided on arrangement for fuel for Ignalina. A discussion of the supply options available for Ignalina should be added to this section of the strategy.

At the end of Section 5.1 there are several items presented as being important to producing the least cost for power supply. These statements include the continued use of Ignalina, preserving the Lithuanian Power Plant and using the Kruonis hydro pumped storage plant in week regulation regime. The data in the strategy is not sufficient to support these statements. Sufficient data to evaluate these statements should be included in the strategy.

This area at the end of Section 5.1 also states that there should be a reform of the pricing system. There have been changes made in the pricing system and other changes are in the near future. The strategy should be specific as to what reforms are being advocated.

This least cost recommendations area at the end of section 5.1 recommends the establishment of an independent party to establish purchase schedules from the competing power generators. It also recommends the implementation of an improved system of accounting and statistical reporting. We strongly agree with these two recommendations.

In Section 5.2, the strategy makes the statement that "with respect to income, heating expenses have reached socially dangerous levels." The strategy also

makes references to problems with data in the heating sector and a "hardly explainable growth of losses" These two statements together illustrate that it is extremely important that there be improvements in accounting and reporting in the heating sector in order to provide accurate management information to the heating enterprises and to the Lithuanian government

One of the reasons given by the strategy for the situation in district heating is the thermal insulation characteristics of the heat consumption sites The strategy states, "Very large investments are needed for the essential improvement of the situation with the repayment period exceeding 20 years in most cases" We agree that investments are needed However, we disagree that all of these are large investments requiring long pay-back periods There have been other areas to experience a catch-up of investments in conservation after a large increase in energy prices The experience in these areas has been that there are numerous low cost and no cost conservation measures which can be implemented Given the importance of decreasing the cost of providing the district heating service, the strategy should provide a broader discussion of the conservation measures which are available and alternative methods for encouraging and financing conservation investments

The strategy states in the final area of Section 5.2 that the substitution of other fuels for district heating should only be considered in exceptional cases We do not have information that contradicts this statement However, the strategy should provide additional information supporting this statement Given the very large investments necessary in the heating sector, additional analyses should be performed to determine if fuel substitution might be the lower cost alternative on a broader scale

The strategy recommends the stimulation of the establishment of energy service companies (ESCOs) as a means of carrying out the needed activities in conservation measures in the heating sector We strongly agree with this recommendation ESCOs could play a significant role in a number of areas in the Lithuanian energy sector

In Section 8 in discussing the electric market the strategy states that the distribution system should be divided into seven companies Since one of the main goals is the attraction of private capital, information from the financial community should be examined before determining the number of distribution companies

There are several statements in the strategy addressing the future structures of the energy markets We think that it is advisable for the strategy to address market structure It is also advisable for this to be one of the topics in the process of the strategy being reviewed and approved by the various sectors of the Lithuania government However, it has been the experience in other countries that once the government has established broad guidelines for the future market,

COVER PAGE

Menaker
1 at 15 37 26

From Jim Strangways
Pages 5 (including Cover)

comments This is the same as the version that I E-Mailed late last night with one comment
This version has also been sent via E-Mail

COPY

Menaker, Howard

From Robert E Borgstrom [rborgstrom@compuserve.com]
Sent Saturday, May 16, 1998 12:38 AM
To Howard Menaker
Subject Lithuania Strategy

Howard --

I have (quickly!) reviewed the Lithuanian Energy Strategy and have the following comments

Power Sector Development

The focus of this paper is to justify the continuing operation of the Ignalina nuclear power plant. We are told that it produces 79-87% of the electricity generated in Lithuania and that its "untimely shut-down" would impose significant costs to the economy. While it's apparent that the closure of this "least cost" producer would have a multiplier effect, I cannot readily accept this conclusion (without accepting the conclusion of the cost studies to which the strategy paper refers).

Ignalina is also argued to be more environmentally friendly than thermal power plants. If Ignalina were shut down, there would be additional pollutants from the increased usage of the thermal plants. This argument presumes that the nuclear plant would be reconditioned and upgraded to meet appropriate safety standards.

From a supply position, Lithuania has significant excess capacity as a legacy of its former role as an exporter to the Soviet Union. Lithuania, not unlike the other FSU republics, had its role to play in an interactive network. Large power plants were established to meet collective needs beyond the local borders. Unless there is a rapid expansion of the Lithuanian economy, there is no need for new capital investment (other than modernization/refurbishment) until approx. 2010. It seems that this presents an argument for phasing out the nuclear plant during this current period of over-capacity, and replacing it with new, non-nuclear capacity.

Notwithstanding the "numbers" in support of life extension, the decision about Ignalina appears to be entirely political. A new plant could be constructed to right-size Lithuania's needs.

Natural gas is seen as playing an increasing role in Lithuania's energy program. The concern, however, is that the Lithuanians are wary of increasing their dependence upon Gazprom. In this regard, non-nuclear plant additions (or refurbishments) may meet some international political objectives: the feedstock would increase ties to Russia.

The paper speaks of joining the Central and Eastern European power grids as a means of achieving reliability of supply. This is a prudent objective in that interconnection would also provide an export opportunity and, thereby, (a) justify the existence of an over-sized nuclear supported system, and (b) provide an alternative to Lithuania's traditional Russian focus.

The legal objectives are focused upon meeting EU objectives and appear to encompass the appropriate market-oriented reforms.

Energy Efficiency

Notwithstanding the excess capacity situation, it is prudent for the government to embark on programs of energy efficiency. It correctly reasons that a history of low energy prices has encouraged wasteful consumption. Consumers must, therefore, be encouraged to conserve energy, particularly as their consumption must be brought into line with their

ability to pay increasing rates for energy. The disturbing note is that while the paper acknowledges the disparity between consumer income, energy costs and energy prices, it does not forcefully argue for cost-based pricing.

The paper suggests that the greatest potential energy savings exist in the household, trade and service sectors. Insulation and modernized heating systems are important, of course, but the accompanying table illustrates that this may not be the most cost-effective way of achieving energy savings. Dwellings account for 37.4 PJ in total potential savings, but at a cost of 22.0 Billion Litas. A similar savings -- 32.4 PJ -- could be achieved from all other sectors for a cost of only 5.9 Billion Litas.

This paper raises more questions (for me) than issues for comment. Nonetheless, I hope these thoughts are helpful and help to keep us in the picture in Lithuania.

Robert

Trip Report of Howard N Menaker

Trip to Vilnius, Lithuania

May 6-7, 1998

USAID Regulatory Reform and Energy Sector Restructuring Project

Assistance to the Lithuanian National Pricing Commission (NCC)

May 6, 1998

In an initial meeting, Resident Advisor Jim Strangways, Project Manager Howard Menaker and Project Administrator Lydia Mezey discussed the schedule for visit, administrative details of Mr Strangways' move to Lithuania and other general items

Mr Strangways stated that we may need to direct some effort to utilities, in addition to the NCC, especially in the area of training He reflected that this will make the program more effective Training topics might include accounting, economics, regulation, management, administration, human resources, international finance, and public information

A subsequent meeting with Giedra Gureviciute of USAID centered on discussions of possible additions for the Bechtel workplan Possible areas of added activity include

- Assistance in restructuring of the energy sector USAID may be asked to participate in ongoing restructuring discussions, including assistance to the Lithuanian Energy Institute who is currently conducting a study of options Current thinking is that the first step in restructuring may be the sale of distribution It was decided that this topic would be discussed with Vice Minister Valentukevicius
- Assistance on legal framework It is rumored that the Government of Lithuania feels that recent PHARE legal work was not acceptable and that the World Bank sees a need for additional work The Ministry of Economy is charged with development of sectoral laws USAID options include legal drafting, comment on current legal drafts, helping the NCC comment on draft laws or an offer of advice regarding EU harmonization
- Assistance in USAID Training Jim will help World Learning design programs for NCC regulatory staff, and utilities, including suggesting candidates and helping to design what participants will do upon return to implement their new knowledge We also discussed in-country training, and agreed to see what subjects most needed, requested by Government representatives and the NCC

In a meeting with NCC Chairman Vidmantas Jankauskas attended by Giedra Gureviciute of USAID Jim Strangways, Howard Menaker and Lydia Mezey, Chairman Jankauskas discussed a meeting with Council of Ministers that afternoon in which they decided to add 3 new members to the Commission, 2 from labor unions, and one from industrial

users. The NCC opposed this move, saying it would politicize the regulatory process, but the proposal will go on the President for action.

The Council also approved one replacement for departed member of the NCC who has left to become the General Director of the utility, the Lithuanian Power Company.

Regarding changes in the workplan Chairman Jankauskas recommended USAID get approval from Vice Minister Valentukevicius.

Specifically, his comments included that it is important to set margins of legal responsibility between the NCC and the Ministry of Economy. He also reflected that in restructuring and legal development, harmonization with EU is "Priority #1". Regarding restructuring, he felt that the government would start with distribution, where current planning is to separate into 7 distribution companies. However, he felt that this does not make sense, as these companies may be too small to be economically viable.

He regarded training as very important and said it would be especially useful to send staff to work with US public service commission staff for 1-2 weeks.

May 7, 1998

A morning meeting with World Bank representative Mantas Nocius included a review of Bank activity in Lithuania, including the existing structural adjustment loan (SAL). There has been one project on restructuring and rehabilitation of Lithuanian Power Company power plants, dispatch center and transmission lines. No conditionalities on the energy sector were associated with the SAL. The Bank is preparing "policy notes" in the coming weeks on energy sector restructuring, which should be available to USAID soon. In addition, we were given a report prepared by the Bank on EU accession, a high priority for Bank officials.

Regarding legal work, Nocius stated that the "umbrella energy law" is in place, and satisfactory, but that work on subsectoral laws has not progressed well. EU PHARE prepared some work on these laws, but it was deemed insufficient by the Lithuanian Government. The Bank feels these laws are of great importance, and is looking for a way to have PHARE assist in further drafting.

With regard to the National Energy Strategy, the future of the Ignalina Nuclear Power Plant is also of highest concern to the World Bank, and they are coordinating work with the EBRD, who is representing the G-7 nations. There will probably be considerable pressure from the EU to close Ignalina, but the Government of Lithuania is looking at options ranging from closure to re-channeling for continued life of the Plant.

Finally, USAID Representative Ron Greenberg, Giedra Gureviciute, Jim Strangways, Howard Menaker and Lydia Mezey met with Vice Minister Viktoras Valentukevicius. The Vice Minister thanked USAID for continuous support, and Ron Greenberg set the

agenda regarding discussion of the workplan Giedra discussed the ongoing tariff work with the NCC, and outlined the ideas we had discussed among ourselves for possible modification of the workplan

The Vice Minister asked Jim Strangways his opinion of the NCC and its capabilities, and Jim answered that he feels the Commission is very capable and could take on new responsibilities Valentukevicius stated that the training Chairman Jankauskas obtained before he became official Chairman was helpful, and that his own experience with NARUC's course at Michigan State University was outstanding

He stated that harmonization with EU requirements is of utmost importance, and then asked for continued support for the NCC in their work

Regarding the Energy Strategy, he emphasized the important considerations on the future of Ignalina Nuclear Power Plant, including the need to plan for and finance its decommissioning He also asked for USAID support in public relations and public outreach concerning decommissioning and other matters, and Menaker responded that there are plans for training in public relations , though not tied to the nuclear issues

On restructuring, Vice Minister Valentukevicius stated that he would welcome Bechtel and USAID input into the study being conducted by the Lithuanian Energy Institute We told him of a telephone discussion this afternoon with the chief author of the study, in which we offered a review of the first draft in the next 10 days He stated that comments should be directed to the Government, to the Institute and to the Lithuanian Power Company

In closing, he stated he would be in Washington on June 8 and 9 for a Baltic Economic Working Group meeting and would be happy to mention the assistance provided to the Government of Lithuania as an example of good cooperation Giedra will help draft some talking points for this meeting