



Annual Report 2004



# Holy cow!

Landsvirkjun contributes to social issues in the rural areas where it operates. We focus on strengthening the infrastructure of tourism in the vicinity of our operations. Among other things, we try to make our power stations places of interest by inviting guests on tours of the facilities and by organising exhibitions and other events there.

The picture theme in this annual report is watercolours by Jón Eiríksson, farmer at Búrfell, Húnathing vestra in northwest Iceland. He painted one cow picture a day for all of the year 2003. His pictures have been exhibited in our Blanda hydro-power station near his farm to the enjoyment of our guests for the past year and will be on show at our facilities in years to come.

Only Jón himself can aptly describe the making of these 365 paintings:

*January 1, 2003:* "Kids, I'll show you what self-discipline is. I'll paint one picture a day for the next few weeks. In order to make it more difficult and stretch the imagination, there will have to be something with cows in every picture." That night the first painting was ready and after a few weeks I had talked myself into painting one a day for the whole year.

"Picture of the day" became sort of an obsession. I constantly made sketches and developed ideas for the next picture. I stared at the cows: Can cows smile? Do bulls flex their muscles? Cows on bikes, cows going for a swim, cows skiing, green and yellow cows. The ideas rushed on to sheet after sheet, day after day. When the farm-

ing kept me busy, I had to paint faster, a kind of snapshots. The time shortage was worst when making hay in July.

*January 1, 2004:* The satisfaction of success. I had shown my children what self-discipline is about and now I was free from the great cow-year. I now paint quiet pictures of hammers and fence posts.



## Landsvirkjun's power stations

<b>Hydropower stations</b>	<b>1,107 MW</b>
Búrfell	270 MW
Hrauneyjafoss	210 MW
Blanda	150 MW
Sigalda	150 MW
Sultartangi	120 MW
Vatnsfell	90 MW
Írafoss	48 MW
Laxá	28 MW
Steingrímsstöð	26 MW
Ljósifoss	15 MW

<b>Geothermal stations</b>	<b>63 MW</b>
Krafla	60 MW
Bjarnarflag	3 MW

<b>Fossil fuel stations</b>	<b>42 MW</b>
Straumsvík	35 MW
Akureyri	7 MW

**Total installed capacity 1,212 MW**

## Landsvirkjun's credit rating in international markets.

	Moody's	Standard & Poor's
Short term	P1	A1+
Long term	Aaa	AA-

## Landsvirkjun's mission

To provide our customers with the best energy solutions to create the basis for a modern quality of life.

### Highlights of the annual accounts (ISK)

	<b>2004</b>	2003
Net profit	7,195 million	1,551 million
Cash generated by operating activities	4,622 million	5,601 million
Liabilities	103.3 billion	93.3 billion
Owners' equity	51.4 billion	41.2 billion
Equity ratio	33.2%	30.6%

### Electricity production, purchases and sales (GWh)

	<b>2004</b>	2003
Total production	7,260	7,245
With hydropower	6,838	6,833
With geothermal power	422	412
Electricity purchases	634	612
Sales to general market	2,304	2,310
Sales to power-intensive industries	5,234	5,232
Sales increase	-0.1%	0.8%



# Overview

The local government in the district of Skeida- and Gnúpverjahreppur, on the one hand, and Landsvirkjun, on the other, closed an agreement between these two parties regarding the design of Nordlingaalda Diversion. As the next step, the two districts of Ásahreppur and Skeida- and Gnúpverjahreppur will include the construction project in their municipal land use plan.

Landsvirkjun sponsored an innovative exhibition at Ljósafoos Station on the river Sog in August and September. Entitled "This Is How We Do Things", the exhibition displayed art and hand-crafts made by Landsvirkjun employees.

At both the river Sog and the river Laxá, Sunday 26 April 2004 passed uneventfully. Thus, both workplaces had achieved a continuous period of 1000 days without any employees sustaining injury at work. It is no coincidence that the records of these two workplaces correspond, since the organised registration of accidents at work and the counting of accident-free days began simultaneously at all Energy Division workplaces in June of 2001.

At the beginning of November a significant step was achieved in introducing quality management at Landsvirkjun when the Energy Division as a whole was accredited according to the ISO 9001:2000 standard.

Towards the end of the year, Landsvirkjun received the recognition "The Weight that Tipped the Scale", which is awarded by the task team "Striking the Balance" for outstanding work within companies or institutions that serves the aim of increasing flexibility and helping staff to coordinate their employment and private lives.

Operations at the two work stations on the rivers Thjórsá and Tungnaá were merged at the turn of the year 2004-2005. Presently, five power stations are run from a single work station at Búrfell.

Fundamental changes occurred in the Icelandic electricity market as 2005 began, such that anyone buying more than 100 kW of electrical power received the option of choosing their own electricity supplier. At the same

holders being Iceland State Electricity and Westford Power Company. About a third of Landsvirkjun's employees were transferred to Landsnet. Administratively separated from Landsvirkjun, Landsnet holds a monopoly in the transmission of electricity in Iceland.

## Human resources in 2004

During the year, Landsvirkjun's regular employees worked 287 man years, a reduction of just under 10 man-years from 2003. The man-years performed by temporary staff amounted to approximately 88, which is an increase of about 5 man-years from the year before.

A total of 280 youths were employed by Landsvirkjun in the summer of 2004, including 236 in conventional summer activities and about 44 university students in a variety of jobs. These summer placements corresponded to about 16% of the total employee man-years.

In April, 3 employees were transferred to Fjarski, and at the end of the year 89 employees to Landsnet.



In August, heavy flooding occurred in the river Jökulsá á Dal. A protective dam above the construction area at Kárahnjúkar was raised and the bridge across Jökulsá river above the dam site was submerged. Nonetheless, no significant damage or delays in work resulted.

time, the company Landsnet hf was launched, whose role it will be to operate the Icelandic electricity transmission network and system operation. Landsnet hf is a subsidiary of Landsvirkjun, which controls just over 70% of the company shares, the other share-



## The Board of Directors

A new Board of Directors took office at the 2004 Annual General Meeting for a term of one year, ending 8 april 2005.

Appointed by the Minister for Industry and Commerce

Mr. Jóhannes Geir Sigurgeirsson, Chairman

Mr. Árni Grétar Finnsson, Vice-Chairman

Ms. Edda Rós Karlsdóttir

Elected by the City Council of Reykjavik

Ms. Álfheidur Ingadóttir

Mr. Helgi Hjörvar

Mr. Vilhjálmur Th. Vilhjálmsson

Elected by the Town Council of Akureyri

Mr. Kristján Thór Júlíusson

## The Executive Board

Managing Director • Mr. Fridrik Sophusson

Deputy Managing Director • Mr. Örn Marinósson

Heads of Divisions:

Finance • Mr. Stefán Pétursson

Energy • Mr. Bjarni Bjarnason

Human Resources • Ms. Sigthrudur Gudmundsdóttir

Information Technology • Mr. Bergur Jónsson

Engineering and Construction • Mr. Agnar Olsen

Corporate Communication • Mr. Thorsteinn Hilmarsson

Marketing • Mr. Edvard G. Gudnason

## Executive Management, Transmission

The administration and finances of the division were separated from other activities of Landsvirkjun on 1 July 2003. The division will be transferred to Landsnet hf, a subsidiary of Landsvirkjun, on 1 January 2005.

Mr. Thórdur Gudmundsson

Mr. Gudmundur I. Ásmundsson

Mr. Thorgeir J. Andrésson



# From the Chairman of the Board and Managing Director

## Restructuring of the electricity market and the founding of Landsnet

One of Landsvirkjun's most important activities last year was preparing for the new Electricity Act that came into force at the start of the New Year, 2005. The Act introduces competition in production and sales of electricity and specifies the regulation of transmission and distribution. Landsvirkjun has prepared for this change, aiming to utilise the new structure as an opportunity to develop and expand, even though some factors in the new structure introduce true challenges for the Company. As part of the preparations, the Transmission Division had become administratively autonomous and kept separate finances from 1 July 2003. At the end of 2004, Landsvirkjun spun its transmission assets into a separate subsidiary, Landsnet. The transmission network was valued at ISK 24.6 billion, following a revaluation of the transmission assets. Landsvirkjun's share in the new transmission

company exceeds 70%. Approximately a third of Landsvirkjun's staff transferred to Landsnet at the beginning of 2005.

According to the new Electricity Act, Landsvirkjun is not permitted to intervene in the day-to-day operation of Landsnet; however, the Act also stipulates that the owners of transmission systems shall get low but stable return on their investment. It is important that the regulator when approving transmission rates and defining the operating framework for Landsnet gives due attention to these arrangements, because Landsvirkjun's obligations and financial performance require the firm to derive an appropriate profit from these assets.

For many years, Landsvirkjun has been Iceland's leading producer of electricity, generating 85% of the total electricity produced, and selling its products wholesale to electric utilities and power-intensive industry. From the beginning of 2005, Landsvirkjun offers its custom-

ers wholesale contracts with terms varying from one to as long as twelve years, whereby the longer contracts are more favourable to the purchaser than those with a shorter term. In this manner, the company seeks the clearest possible insight into emerging developments in the electrical power market, so that investments and marketing activities may be targeted accordingly. Electrical production is growing among Landsvirkjun's competitors and the firm must ensure that its ability to respond, should the trend move towards a tightening of the wholesale market.

## Possible changes in the ownership of Landsvirkjun

Towards the end of 2004 it was announced that Landsvirkjun's owners were discussing plans for the Icelandic State to acquire those shares in the company that are owned by the municipalities of Reykjavík and Akureyri. A memorandum of understanding to this



effect was signed in February 2005, expressing the aim to assess the value of Landsvirkjun this year and to present the necessary legislative bills during the autumn session of Parliament, so that the change in ownership could take place at the turn of the year 2005/2006. Moreover, the Minister for Industry has declared that the aim is to merge Landsvirkjun, Iceland State Electricity, and Westford Power Company. The vision of the Landsvirkjun management, also shared by the directors of the other two energy companies, is that the merger would result in Iceland State Electricity and Westford Power Company becoming independent firms within a group, which would include the operating units and subsidiaries of Landsvirkjun. This would create a vertical power company, active in all fields of the electricity market: production, transmission, distribution and sales. In view of the vigorous business conducted by energy firms throughout Iceland, we are confident that these modifications may be carried out in a manner which will improve the prospects of both consumers and the newly formed enterprise resulting from the merger and which will address the interests of rural communities. A powerful group of this nature would also be fully capable of growing and flourishing in an international environment.

### Cooperation and consultation

The management of Landsvirkjun is fully aware that new projects undertaken by the Company, as well as its general operations, will seldom be applauded

by all. On the other hand, the interests and influence of the public are far better assured now than was the case and, as a result, the Company has emphasised open communication, in a determined attempt to solve problems and resolve disputes fairly, and also to engage in consultation and cooperation from the initial stages of project planning.

Landsvirkjun supports frank discussion with stakeholders and other concerned parties of disputed issues, relating to its plans and operations. In addition, the company understands that, in some instances, the outcome will be to bring the debated issues before the courts for resolution. In East Iceland, Landsvirkjun and Alcoa have founded a consultation group, which is working towards finding means of assessing sustainable development in that region. Should this undertaking succeed to the extent that is now anticipated, this would be a desirable model for representatives of dissimilar interests to consult and cooperate, in order to achieve positive, fruitful action. This undertaking is explained more precisely in a special chapter below.

### Finance

As revealed in this report and the company's annual financial statement, last year showed a record profit of ISK 7.2 billion. This is not the first time for fluctuations to occur in the firm's net income due to conditions in global currency markets. It is imperative to note that this profit is based on the high exchange rate of the Icelandic króna, therefore in no way

indicating a position built on success in company operations. One may expect this cycle to reverse itself and lead to future losses. On the other hand, this word of warning does not detract from the fact that Landsvirkjun operations were entirely satisfactory during 2004. If the strengthening of the króna and the weakening of the dollar is disregarded, business corresponded well to company projections at the start of the year.

Compared to the previous year, the Group's operating income grew by 6.5% through higher tariff rates to public utilities and higher prices charged to power-intensive industry; however, this was counteracted by the low status of the US dollar. Taking into account rises stemming from developments in general price levels, Landsvirkjun's operating expenses stayed similar to those of the previous year, with company operations returning ISK 4.6 billion to support investment and the repayment of liabilities.

In all, company assets amount to ISK 154.7 billion in the consolidated financial statement for 2004, having risen by ISK 20.2 billion between years. This increase is above all due to Landsvirkjun's investment in the Kárahnjúkar Hydro-power Project. At the close of 2004, equity amounted to ISK 51.4 billion. The equity ratio is 33.2%, compared with 30.6% at the end of the preceding year; this increase is explained by the year's profits and the special revaluation of the company's transmission assets, amounting to ISK 3.4 billion.



# Sustainability in East Iceland

It is the policy of Landsvirkjun to design, build and operate Kárahnjúkar Power Plant in such a way as to compare favourably internationally and to have minimum environmental impact.

An important factor in achieving this aim is the joint effort of Landsvirkjun and Alcoa to analyse and monitor the sustainability of the power plant and aluminium smelter in East Iceland. The impact of the construction projects in the East is being continuously observed and their impact assessed on the basis of the two companies' objectives with regard to sustainable development.



Sustainable development is a concept referring to development which relinquishes the emphasis on short-term economic gain, looking instead to the long-term and attempting to find a balance among economic, social and environmental factors. Sustainable development calls for integrating these factors into the decision-making process. The goal is that the current generation should be able to attain the prosperity it aims for without reducing the potential of future generations for reaching the same goal.

The sustainability project consists in the first place of generating statistical indicators that will help both companies to reach their objectives of sustainability during the construction and operational periods of the aluminium plant, power plant and transmission lines. In the second place, the success that Landsvirkjun

and Alcoa achieve is to be measured over the long-term.

The use of the concepts "sustainable development" and "sustainability" in this project does not entail a declaration that the construction in East Iceland is or will be sustainable, but rather the desire of the companies to adhere to the policy that the projects will adapt insofar as possible to the ideology of sustainable development.

## Consultation

Open, transparent decision-making and consultation with stakeholders are key

elements in sustainable development. Landsvirkjun and Alcoa set up a consultation group for the project upon its inception, and this has had considerable influence on the paths chosen.

The consultation group consists of representatives of NGOs, local authorities, scientists, professional institutes and universities, including environmental associations, both in Iceland and abroad, comprising a total of some 35 people. This group has worked with Landsvirkjun and Alcoa representatives towards defining what factors ought to be measured and monitored in order to obtain a perspective on sustainable development in East Iceland.

## Procedure

Landsvirkjun and Alcoa have formulated a procedure for assessing the sustainability of the construction projects. The pro-

cedure is divided into four phases, each presenting several task components:

### Phase 1

#### *Context and impact (summer, 2004)*

The foundation for the project was laid by defining its objectives, gaining cooperation from stakeholders, and identifying the main factors which it is important to monitor and measure, both those presenting opportunities and those posing risks.

### Phase 2

#### *Indicators and the baseline situation (beginning of 2005)*

Statistical indicators and criteria are to be developed and an assessment conducted of how these may be influenced by power development, the aluminium plant and transmission lines. At this stage, available information is collected on the baseline situation and necessary new data obtained.

### Phase 3

#### *Implementation plan (summer, 2005)*

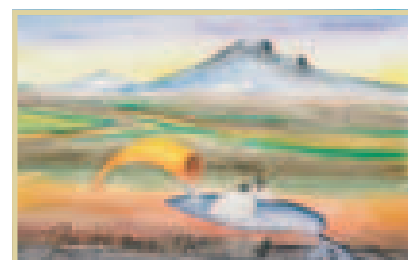
The roles of those responsible for implementing individual task components are defined. The plan is integrated with the work of external parties. Statistical objectives or criteria are established for each indicator, establishing how monitoring should be carried out and preparing the implementation plan.

### Phase 4

#### *Implementation (end of 2005)*

A monitoring system is set up in accordance with Phase 3, and the results are recorded and presented. Initial measurements are reviewed, supplemented with new ones. Responses are made to potential changes which the measurements might reveal.

More information on the sustainability project may be obtained by visiting the project website, [www.sjalfbaerni.is](http://www.sjalfbaerni.is).



# Electricity transmission

During the year, the Transmission Division prepared for the founding of Landsnet hf, whose intended role is to handle electricity transmission in accordance with relevant laws and regulations. Landsnet hf is owned by Landsvirkjun, Iceland State Electricity, and Westford Power Company.

The year saw the first steps in introducing a Quality Management System modelled on the ISO 9001 standard, with the aim of Landsnet acquiring this certification before the close of 2005, as has also been targeted by Landsvirkjun as a whole.

Electricity transmitted through the transmission grid reached a total of 7,773 GWh in 2004. Transmission losses amounted to 230.6 GWh, or just under 3% of the total transmitted power.

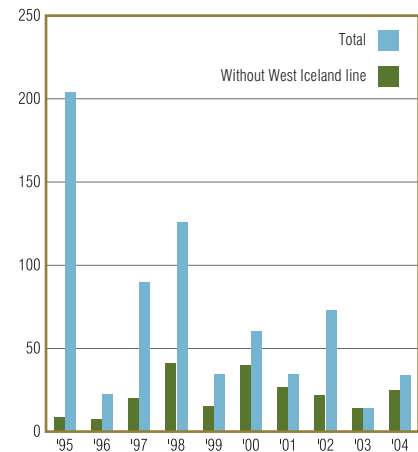
In April, the first contract with regard to electricity transmission in the new

business environment was signed, between the Landsvirkjun Transmission Division, on the one hand, and the companies Sudurnes Regional Heating and Reykjavik Energy, on the other. This contract relates to the expansion of Nordic Aluminum and remains valid for 20 years. To this purpose, investments amounting to ISK 6,600 million will be required for transmission lines and substations, the outstanding single item being the construction of Sultartangi Line 3.

The Transmission Division operated 30 transformer stations and 1,830 km of transmission lines in 2004, at voltages of 66 kV to 220 kV. Company success in operating and maintaining the transmission system is in part measured by participating in international benchmarking. The newest results strongly indicate that the goal of belonging among the leading transmission firms has been achieved.

There were 68 power disruptions without notice in 2004, compared to 94 in 2003. These resulted in 34 minutes of system outage, which is a somewhat higher figure than in the previous year. If the West Iceland Line is excluded, system outage drops to 25 minutes, also slightly higher than the year before.

System outage minutes



# Power production, purchase and sales

Electricity production went smoothly during the year. Landsvirkjun aims for all the generating units in its power stations to be available for running 99% of the time during the winter months, from 1 October until 1 April. This objective was not achieved during 2004, as the generating units were available for operation 97.7% of the time, compared with 98.9% during the same period of 2003. The main reason is that three generating units at the Búrfell Station and one unit at Hrauneyjafoss Station underwent annual inspection in the fourth quarter of the year. Another reason is that one unit at Sigalda Station was out

of operation for two weeks during the fourth quarter while the monitoring system was being replaced. The target still remains that power station generating units should be available 99% of the time during the first and fourth quarters of each year.

Regular maintenance work was carried out during the second and third quarters of the year while the system load was lower. Generating units at company power stations were available 96.4% of the total time throughout the year, an improvement of over 4% from the previous year. Landsvirkjun now runs ten

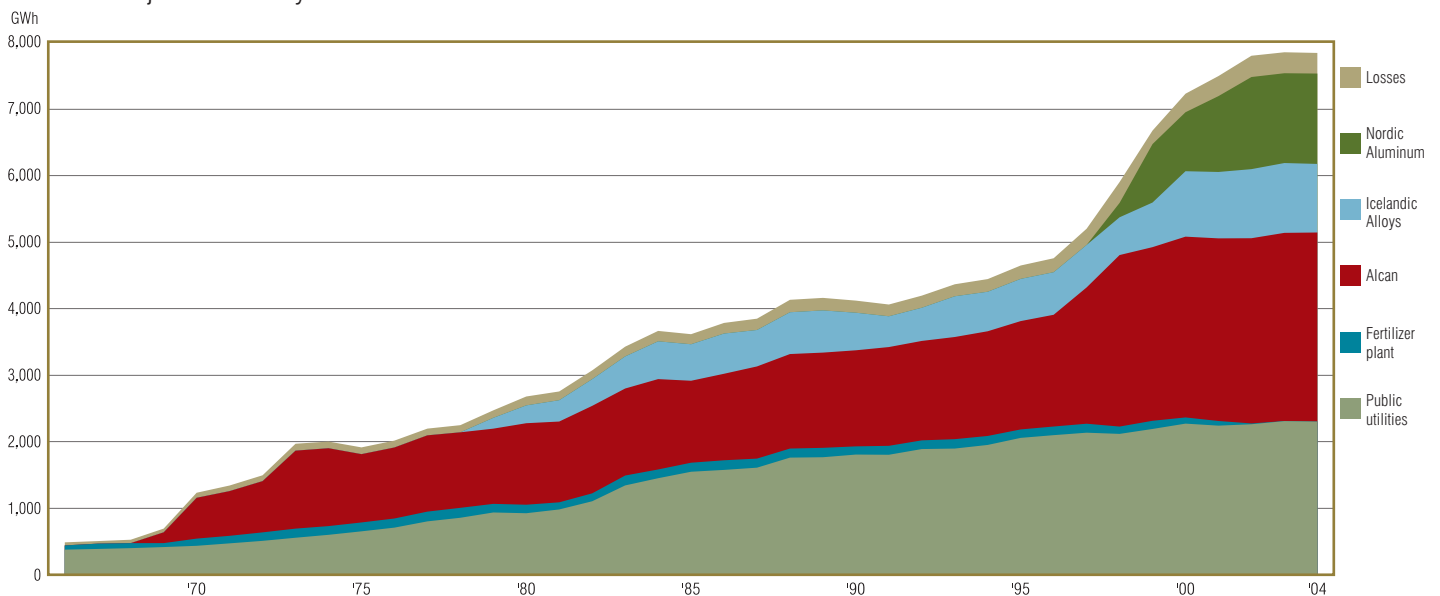
hydropower stations and two stations powered by geothermal steam, as well as two powered by fossil fuel for emergency use.

Amounting to 7,260 GWh in 2004, Landsvirkjun's electricity production was its greatest ever, and an increase of 0.2% from the previous year. The total Icelandic production was 8,619 GWh, of which Landsvirkjun's share was 84.2%, the same proportion as the year before. The company's share in the total production by hydropower plants was 6,838 GWh, or 96%, and 422 GWh in geothermal plants, or 28.5% of the total. In addition, Landsvirkjun purchased 633 GWh of electricity from Reykjavík Energy and Sudurnes Regional Heating for resale to power-intensive industry.

Over the year, Landsvirkjun's electricity sales reached 7,537 GWh, decreasing by 0.1% from 2003. Electricity losses in the transmission system and own use comprised 310 GWh, or just over 4% of total energy production. The sale of primary electricity to public utility companies rose by 2%, though when secondary electricity is also accounted for, the overall sale to public utilities was unchanged from the preceding year. Electricity sales to power-intensive industry also remained virtually unchanged.

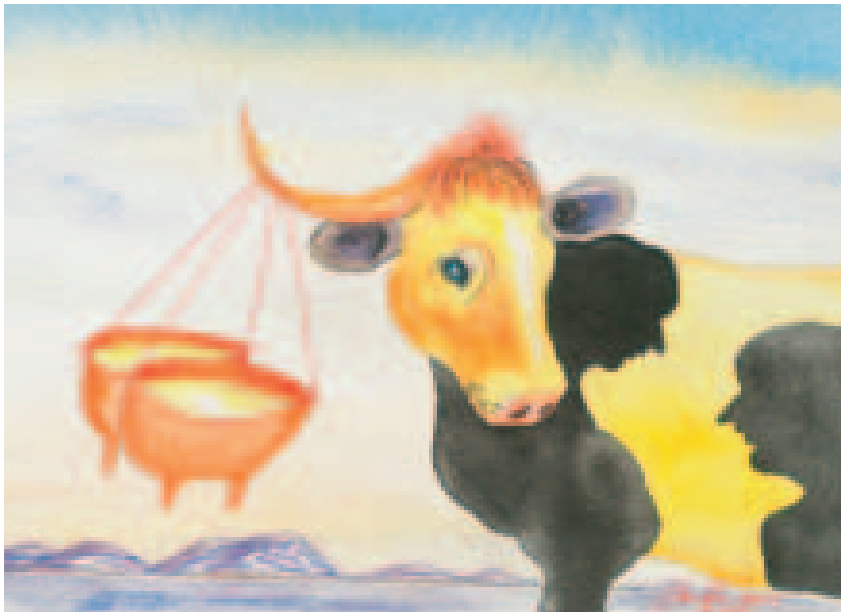


Landsvirkjun's electricity sales and losses in 1966-2004

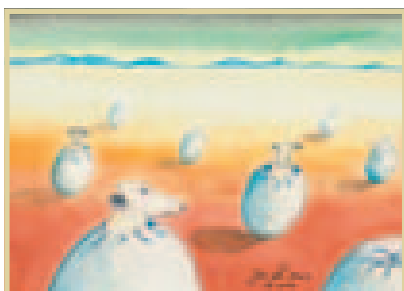


# Marketing

The status of Landsvirkjun's water budget remained good throughout the year, with nearly the entire year favourable regarding reservoir inflow. Landsvirkjun allowed its customers to benefit from this positive situation by lowering the price of electricity produced as surplus power. Thus the need was practically non-existent for operating the fossil-fuel stations which are otherwise used by some utilities to generate electricity at peak-load times.



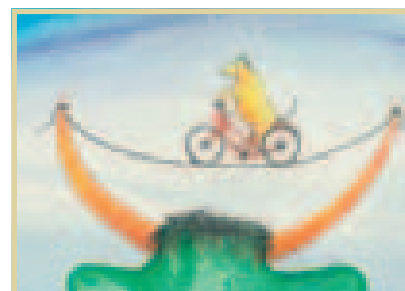
There was some reduction in the sale of secondary power last year, due mainly to the small capelin catch and a warm winter. Some new contracts were closed during the year. Secondary power is sold at a lower price than primary power, since Landsvirkjun is permitted to interrupt its delivery in the event of a water shortage. Secondary power is useful mainly to those who can turn to alternative power sources in place of electricity whenever required. Frequently, secondary electricity replaces oil as an energy source, thus significantly reduc-



ing greenhouse gas emissions. In 2005 Landsvirkjun plans on revising all its terms concerning secondary power.

The new Electricity Act that went into effect in 2003 marked a watershed in matters relating to electricity in Iceland. During 2004, Landsvirkjun strongly emphasised strategic preparation of the company for the new environment, especially the changes that will occur in 2005 when competition is introduced to

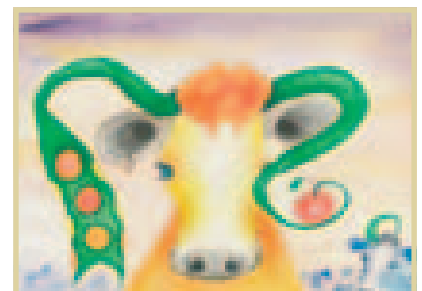
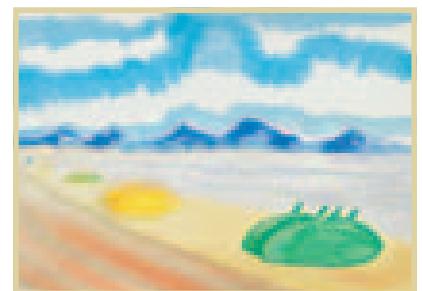
a portion of the retail market. To this end, new wholesale contracts were concluded with the firm's customers, taking effect at the beginning of 2005. With regard to such contracts, Landsvirkjun offered its customers varying time periods ranging from one to twelve years, with lower energy prices according to the length of the contract period. Every customer accepted some combined form of the contracts on offer. Other contracts were signed with Landsnet covering certain aspects of system operations, such as spinning reserves. This



entails Landsvirkjun's ensuring that a specific spinning reserve level is maintained in the electrical system at all times, should the need arise. Furthermore, Landsvirkjun will offer electricity on the balancing energy market, which is intended to bridge the gap between the orders placed by electricity buyers and the buyers' actual use.

No new contracts with power-intensive industries were concluded during the year. The year saw discussions with Nordic Aluminum on electricity sales to the 90,000-tonne enlargement of the company's smelter at Grundartangi. No contract was realised on this occasion; however, discussions will continue about electricity for still further expansion. Over the course of the year, quite a number of companies in power-intensive industries expressed an interest in finding out about the construction of major factories in Iceland, and Landsvirkjun presented them with the available options.

During the year, the possibility was explored of Iceland's electricity producers obtaining so-called green certificates for their production, since such certification can increase the income of environmentally friendly power plants. It is anticipated that the first steps towards selling such certificates will be taken in 2005.



# Research, development and construction

## Glaciological research

Glaciers were studied as in the past through measurements of accumulation, melt, ice velocity and runoff at Langjökull and Vatnajökull, along with the construction of a computational model for the flow and mass balance of Vatnajökull. The mass balance of Langjökull during the glacial year of 2003-2004 was negative by 1.49 m, distributed evenly across the entire glacier, and has been negative by a total of 10.62 m over the past six years. As for Vatnajökull, its mass balance was negative by 0.92 m in the glacial year – the tenth year in a row with a negative balance. Taking the past 13 years, the mass balance has been negative by a total of 6.75 m.

long-term impact on the nature reserve at Thjórsárver. Not only are the design prerequisites for the Diversion almost fully prepared, but the preparation of tender documents on the pumps and electrical equipment is far progressed, so that it will be possible to invite tenders on constructing the Diversion with relatively short notice if required.

## Skaftá Diversion – Skaftá Power Project – Hólmsá Power Project

Project design was concluded last year for diverting Skaftá via Langisjór into Tungnaá – a project expected to produce 465 GWh annually and to be very economical. Extensive research was continued into hydrology, sediment transport,

finished. Two development options come up for consideration at Núpur: one west of Thjórsá river in a single plant named after Núpur, and the other as two plants east of the river, associated with Hvammur and Holt. Altogether, these options would entail some 250 MW installed capacity and have an energy production capacity approaching 1,900 GWh per year. These studies are in part stipulated by the ruling on the environmental impact assessment of the projects. In compliance with the Electricity Act, a research permit was applied for in connection with the above projects.

## Skjálfandafljót river and the Jökulsá river located in Skagafjörður

On the basis of the Electricity Act, a research permit was applied for respecting the hydroelectric development of Skjálfandafljót, north Iceland. A report was completed on the geological research conducted on this hydro project in 2003. In addition, a research permit application was filed for hydropower plants in the west and east branches of the glacial river in Skagafjörður, north Iceland.



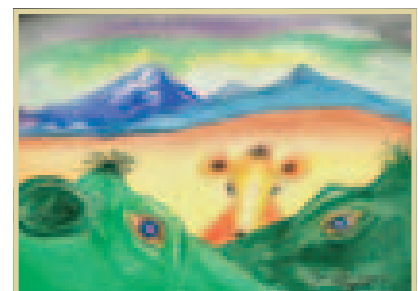
## Nordlingaalda Diversion

In 2004, the project design of the Diversion was completed in accordance with the January 2003 ruling on environmental impact by the acting Minister for the Environment. The project design is based on the surface elevation being 566 m above sea level in summer and 567.5 m in winter. Besides extensive groundwater measurements that were continued in the area to prepare a better base for monitoring studies in the future, wide-ranging investigations into sediment transport, sediment accumulation and sediment flushing were also concluded. Through this research it was possible to demonstrate that the Diversion, as stipulated by a provision in the Minister's ruling, would have no

and ground water, and a research permit regarding this Diversion was applied for, in accordance with the Electricity Act. The preliminary design of a 72 MW development for Hólmsá river in Skaftártunga was finished, whereas work that was proceeding on the preliminary design of a 140 MW plant in Skaftá river will be concluded in the first half of 2005. The last two of these projects are being conducted in cooperation with Iceland State Electricity.

## Lower Thjórsá river

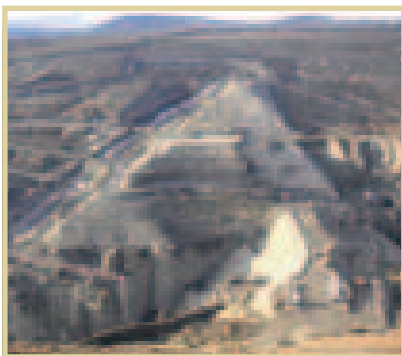
Various preparatory research continued in the Thjórsá river below Búrfell and at Núpur and the waterfall Urridafoss, since the environmental impact assessment for these hydropower projects is



# Kárahnjúkar Hydropower Project

Having commenced in 2003, construction was ongoing at Kárahnjúkar (690 MW). Contracts have been concluded for what amounts to over 90% of the estimated project cost. An international as well as Icelandic group of consultants and contractors is involved in the project.

Generally speaking, construction went well in 2004 and for the most part according to schedule. However, the construction of Kárahnjúkar Dam was an exception to this and was running four months behind schedule at year's end, so that special measures were taken in December to put the dam construction back on schedule, involving an agreement with the contractor Impregilo to work continuously on construction of the dam throughout the winter instead of taking the planned 10-week break.



## Kárahnjúkar Dam

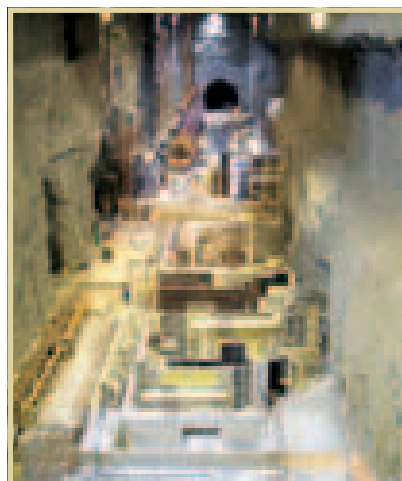
It was on 18 December 2003 that Jökulsá á Dal was diverted past the dam site through a by-pass tunnel. The construction of a cofferdam proceeded through the early part of 2004 and ultimately attained a height of 56 m. Another task was to begin cleaning the canyon bottom under the dam, where the rock surface was 7-12 m lower than originally estimated. The rather mild winter, with alternating freezes and thaws, often brought on hazardous situations in the canyon through rockfall, on account of which a tragic fatal accident occurred in the night before 15 March. In May, upon completion of the canyon bottom cleaning, a rather large fault was encountered where the dam's toe wall crosses the canyon. Although the fault had been visible in pre-construction drill holes, it proved more extensive under the toe wall than had

been expected. Because of the fault and the lower-lying bottom, the dam design had to be modified. Due to unusually high flooding in August, the cofferdam upstream of the construction area had to be raised. All of this delayed activities somewhat. The filling work for the dam progressed well and according to schedule with about 30% of the total 8.5 million cubic metres in place at the close of the year.

project. Three tunnel boring machines were transported to Iceland, each to be assembled by its particular tunnel entrance. After the first machine began boring at Adit 3 leading in from Glúmsstadalur valley on 24 April, boring started at Adit 2 by Axará on 26 July, and boring in from Adit 1 on Valthjofsstadarfjall commenced on 20 September. Work has gone very well in Adit 3, where distances up to 1000 m per



TBM ready for action outside Adit 2



Work on the powerhouse cavern and related structures went extremely well during the year and progressed ahead of schedule. Excavation was finished and civil works in the cavern commenced towards year-end.

month were achieved. The other tunnels started more slowly, due to harder rock as well as technical difficulties with the conveyor belts transferring the spoil out of the tunnels. At year's close, a total of some 28% of the contracted tunnel construction was finished, in all about 17 km.

## Gate equipment

On 5 August, a contract was concluded with the lowest bidder, ATB Riva Calzoni, Italy, on the design and manufacture of gate equipment for the bottom outlet of Kárahnjúkar Dam, the intake at Kárahnjúkar and the intake at Ufsarlón reservoir. Design of the equipment commenced late in the year and proceeded according to schedule.

## Steel linings for pressure shafts

A contract was signed with DSD Stahlbau GmbH, Germany, in November 2003 on the design, manufacture and installation of steel linings in the pressure shafts of Kárahnjúkar Power Plant.

## Headrace tunnel

Work on the headrace tunnel was extensive over the year, since this constitutes the largest contract of the

The contractor worked last year on obtaining materials, preparing designs and contracting with various subcontractors. Work is to start on site in February 2005.

### Electromechanical equipment

In 2004, the contractor VA Tech Escher

Wyss GmbH worked on design, contracting with assorted subcontractors, and the model testing of turbines. After thorough testing, it was decided to use so-called splitter blade runners in the generating units, as they yield greater efficiency than traditional turbine runners. Production of the steel compo-

nents began last year, and in February 2005 the first parts of the mechanical equipment will be transported to the project site.

### Communication

Landsvirkjun has placed strong emphasis on publicising the preparations for and construction of Kárahnjúkar Power Plant, with the project website, [www.karahnjukar.is](http://www.karahnjukar.is), reporting regularly on progress of the principal factors in building. At the Végardur community centre in Fljótsdalur valley, Landsvirkjun maintains a Visitor Centre, which around 12,000 people came to visit last year. Still more people have surely made use of the possibilities offered by Landsvirkjun's new road connection across the highland expanses to Kárahnjúkar in order to observe the dam construction site and at the same time to acquaint themselves with the spectacular mountain views and nature on the highland plain north of Vatnajökull glacier.



*A contract was signed with Sudurverk of Iceland for the construction of the two side-dams at Kárahnjúkar in February. Construction went ahead according to plan during the year.*



# Finances

The year's net profit amounted to ISK 7.2 billion, as compared to ISK 1.6 billion for the preceding year. This radical change is mostly the result of higher exchange-rate gains on long-term liabilities abroad. While exchange-rate gains during 2003 totalled ISK 1.3 billion, in 2004 they were ISK 8 billion. These exchange-rate gains are mostly explained by changes in the rates of the dollar and euro in relation to the Icelandic króna. Return on equity was approximately 17.4% in 2004, compared with 3.8% in the preceding year. When interpreting the above figures, it must be kept in mind that the exchange-rate gains booked on long-term liabilities have not yet been realised, since the loans have yet to be paid.

## Income statement

The Group's operating profit was ISK 13.7 billion in 2004, increasing by 6.5% compared to the previous year. This increase results mainly from two factors. On the one hand, sales to public utilities rose by ISK 215 million, which is explained entirely by a tariff rise of 2.9% in August 2004. On the other hand, income from sales to power-intensive industry rose by ISK 506 million. This increase stems from a higher average aluminium price, despite its being counterbalanced by the impact of exchange rate developments on the dollar in relation to the Icelandic króna. Above all, income from power-intensive industry is dependent on the world price of aluminium and the exchange rates of foreign currencies.

The Group's operating expenses amounted to ISK 10 billion in 2004, compared to ISK 9.8 billion in the previous year. Among the operating expenses for 2004, depreciation on fixed assets mattered most, at ISK 5.3 billion for the year, which was the same amount as for the preceding year. In other respects, operating expenses increased by just over 4% between 2003 and 2004, staying in step with developments in general price levels.

According to the above, the operating profit (EBIT) of the group increased in 2004 by almost ISK 600 million, compared to the previous year. Moreover,

operating profit income excluding depreciation (EBITDA) rose by ISK 600 million between the two years, amounting to ISK 9 billion for 2004. This sum is significant, as it provides a strong indication of the company's ability to meet interest payments and instalments on long-term loans. The table below shows the annual sum of operating profit excluding depreciation as a percentage of long-term loans, including the instalments on such loans.

Year	Operating profit excluding depreciation (EBITDA)	Long-term debt	Percentage
2004	9.0	96.9	9.3%
2003	8.4	88.1	9.5%
2002	9.2	77.2	11.9%
2001	8.7	90.3	9.6%
2000	7.6	73.6	10.3%

This percentage has remained virtually unchanged, in spite of the rising long-term debt resulting from investments that have yet to bring a return, of which Kárahnjúkar Hydropower Project is the most significant. Favourable exchange rate developments have also played a major role in maintaining the ratio.

In 2004 net interest expenses were ISK 3.8 billion, contrasting with ISK 3.0 billion in the preceding year. The increase results from greater interest-bearing liabilities due to investment loans, even though average interest levels remained similar to those of the preceding year, or just over 3%. The interest on capital tied up in fixed assets has been booked as an increase in the cost price of fixed assets under construction until the assets in question are put to use. In 2004 interest expenses booked as assets totalled approximately 600 million ISK, compared with around 200 million ISK in the previous year. The reason for this hike is that investments in projects under construction grew by ISK 20 billion during 2004. Accordingly, net interest expenses were booked at ISK 3.2 billion in 2004, as compared with ISK 2.8 billion in the year before.

Financial costs came out overall nega-

tive by ISK 3.5 billion during 2004, whereas they were positive by ISK 1.5 billion in the preceding year. This about-face is explained by a hefty increase between years in exchange rate earnings on long-term liabilities. The difference, amounting to ISK 5 billion, explains for the most part the improved net profit of the company during 2004 when compared with the year before. The cost of hedging risk in regard to sales income, to the amount of ISK 1.3 billion, is booked in 2004 as a reduction in currency exchange gains.

## Balance sheet

Landsvirkjun's assets totalled ISK 154.7 billion in the firm's consolidated financial statement for 2004, categorised as follows: property, plant and equipment amounted to ISK 147.8 billion and current assets were ISK 6.9 billion. In the previous year, total assets figured at ISK 134.5 billion. The principal reason for this growth is investment in the Kárahnjúkar Hydropower Project, whose cost was ISK 18.7 billion in 2004.

As 2004 ended, the booked value of the company's transmission system was ISK 24.6 billion. Upon the transfer of these assets to Landsnet hf. on 1 January 2005, this amount was compensated through a promissory note and the issue of stock. Landsvirkjun's share in the new transmission company somewhat exceeds 70%.

At the end of 2004, Landsvirkjun's equity was approximately ISK 51.4 billion, and the company's equity ratio is 33.2%, compared with 30.6% at the end of the previous year. This increase is explained by 2004 net profits and the special reassessment of transmission assets, giving a total of ISK 3.4 billion. The assessment was based on a report by a special assessment committee, appointed by the Minister of Industry and Commerce to assign a value to the transmission systems of the Icelandic power companies.

The company's long-term liabilities, including next year's instalments, totalled ISK 96.9 billion at the close of 2004, compared with ISK 88 billion in the previous year. With a view to the fact that every project under construction

has been financed by loans – with paid expenses relating to these assets amounting to ISK 36 billion at the end of 2004 – it is clear that liabilities due to structures that are in operation surpass ISK 60 billion. This amount corresponds to some 28% of the original construction cost of structures in operation, which was ISK 218 billion at the end of 2004, referring mostly to restated cost.

### Cash flow statement

In 2004, company operations returned cash flow in the amount of ISK 4.6 billion for supporting investments and the required return on capital. Cash income amounted to ISK 13.6 billion, whereas it was ISK 13 billion during the preceding year. Cash operating expenses were ISK 4.3 billion in 2004, having amounted to ISK 4.6 billion in the year before. Thus the company's operating profit increased on a cash basis by ISK 900 million during 2004. The net cash outflow due to financial costs amounted to ISK 2.8 billion in 2003, as compared with 4.7 billion in 2004. This figure also includes outflow due to hedging of revenues amounting to ISK 1.2 billion, which means that cash expenses due to net interest costs totalled ISK 3.5 billion for 2004.

Paid investments in fixed assets amounted to ISK 20.8 billion during 2004, whereas they added up to ISK 16.7 billion a year earlier. By far the greatest part of the investments in both years related to construction at Kárahnjúkar. Investments in fixed assets were for the greatest part financed through borrowed capital, with loans taken in 2004 amounting to ISK 19 billion, following a total of ISK 21.6 billion the year before. Dividends paid to owners were ISK 358 million in 2004, compared with ISK 350 million in 2003.

### Risk management and the aluminium market

Landsvirkjun's income is to a considerable extent dependent on the prices for aluminium on global markets. It is therefore crucial for the company to analyse carefully the commodity's position on those markets. In 2002 and for the greater part of 2003, aluminium prices were rather depressed in reference to

price levels of the past 10 years. Near the end of 2003, however, prices began rising, and 2004 experienced almost continuous price escalation. LME's three-month average price for aluminium stayed under \$1,400 per tonne in the first half of 2003, but had risen to \$1,850 per tonne by the end of 2004.

The currently high aluminium prices are explained by various factors, such as some shortage of alumina, the economic situation in China, and the weakness of the dollar, the currency upon which world market prices for aluminium are based. This represents the interplay of several factors; therefore, the company has in addition to its own analysis sought the advice of experts from outside Iceland regarding forecasts of aluminium market prices.

To strengthen its income base, the company has entered into derivatives contracts, not only for the purpose of risk management aimed at fixing prices to the company, but also and in particular with the intention of warding off the impact of a downturn in aluminium prices. Such contracts were closed in 2003, when predictions by experts indicated a temporary price reduction on the markets. These predictions have not been realised, so that the company has suffered some indirect loss of income due to the derivatives contracts.

Expenses on account of aluminium derivatives contracts reached ISK 1.3 billion in 2004. On the other hand, increased revenue from rising aluminium prices compensated for a significant portion of this amount. As 2004 ended, the marked to market of the company's aluminium derivatives contracts was negative by ISK 2.5 billion, with the contracts remaining valid for the next four years. If the assumptions of the calculations prove correct, revenue may be expected to increase correspondingly, so that prices will have been fixed within a certain interval. Should predictions on the other hand turn out wrong and prices drop, these same aluminium derivatives contracts will result in higher prices being paid to the company than implied by current aluminium prices on the market. This approach prevents

negative effects on the company's operation from a downward swing in the aluminium market.

Furthermore, Landsvirkjun has concluded interest swap agreements, mainly with the goal of fixing interest rates through the long term. Interest rates on new loans were very low in 2004, or about 2.2%. There are strong expectations that interest rates will climb during the next few years, in which case the interest swap contracts will have benefited the company. It must be kept in mind that the company's object with this kind of interest management is to minimise interest costs in the long run. At the end of 2004 the negative fair value of the interest swap agreements was approximately ISK 295 million. The notional amounts in the interest rate swaps are ISK 32 billion. In addition, the company has closed so-called currency swap contracts with regard to long-term loans. The negative fair value of these contracts was ISK 9 million at the end of 2004, although the notional amounts of the contracts total about ISK 10 billion.

### Loan markets

The financing of Landsvirkjun on foreign markets went well last year. The company issued bonds to the amount of EUR 145 million, USD 10 million, JPY 3,000 million and GBP 3 million, in accordance with the company's EMTN framework agreement. The framework agreement was expanded from one to two billion USD in June. Furthermore, Landsvirkjun took a loan amounting to EUR 70 million through the Nordic Investment Bank in Helsinki and another loan of EUR 50 million from the European Investment Bank in Luxembourg. Landsvirkjun obtained the above loans at favourable rates, with a credit term extending up to 20 years, which is convenient for the company in regard to ongoing projects.

# Financial Statements 2004

## Directors' report

The financial statements of the company for 2004 are in all material respects in conformity with the financial statements of the previous year. The consolidated financial statements for the parent company include the statements for three subsidiaries: Fjarski ehf, Icelandic Power Insurance Ltd, and Landsnet hf. The financial statements of Íslandsmiðill hf, a subsidiary of Fjarski ehf, are also included in the consolidated financial statements.

Landsnet hf was established in 2004 and the company's share is about 71%. The operation of Landsnet hf started at the beginning of 2005 and henceforth Landsvirkjun, the parent company, will only operate in power production, whereas the subsidiary, Landsnet hf, will operate in power transmission. All of Landsvirkjun's fixed assets used in power transmission were purchased by Landsnet hf as at January 1st 2005 for approximately 25 billion ISK.

Operating revenues amounted to 13.7 billion ISK in 2004 compared with 12.9 billion for the previous year. Operating expenses amounted to 10.0 billion ISK in 2004 compared with 9.8 billion ISK for the previous year. Thus, the net operating profit amounted to 3.7 billion ISK for 2004 compared with 3.1 billion ISK for the previous year. The net increase is due primarily to increased operating revenues.

Material changes occurred in net financial costs during 2004 as compared with the previous year. In 2003 the net financing costs were 1.5 billion ISK, but in 2004 the financing income exceeded financing costs by 3.5 billion ISK. Therefore, the net change in financial costs increases net income for 2004 by 5 billion ISK. This material change can for the most part be explained by the increase in the net foreign exchange gains on long-term debt denominated in foreign currencies in the amount of 6.7 billion ISK;

the foreign currency gains amounted to 1.3 billion ISK in 2003 as compared with 8 billion ISK in 2004. Cash payments for hedging of sales revenues in the amount of 1.3 billion ISK are netted from the foreign exchange-rate gains. The exchange-rate gains are unrealized and that must be kept in mind when interpreting the results for 2004. The exchange-rate gains on long-term debt can primarily be explained by changes in the exchange-rate of the US dollar and the Euro vis-à-vis the Icelandic króna.

Landsvirkjun has entered into various types of derivative contracts in order to manage the company's operating risk. The contracts relate to interest and currency rate risks as well as risk associated with sales revenues which are dependent upon the world market price of aluminium. Additionally, the company has entered into foreign exchange contracts to profit from short-term changes on the currency market. Information about the effects of these contracts on the operation of the company for 2004 are provided in the notes where information is also provided on the fair value of outstanding contracts at year-end 2004, regardless of whether such contracts were made for risk management or speculative purposes.

The net negative mark-to-market value of option contracts to hedge revenues outstanding at the end of 2004 amounted to 2.5 billion ISK. If the assumptions used for arriving at this valuation prevail, the estimated revenues will increase correspondingly. The net negative fair value of other derivative contracts outstanding amounted to 340 million ISK of which 295 million ISK relate to interest rate swap contracts and the remaining balance, 45 million ISK, to currency swaps and short-term foreign exchange contracts. Finally, the power contracts include embedded derivatives which have not been valued but are expected to have a positive value due to escalation of alu-

minium prices from the inception of the contracts.

The net profit for the year amounted to 7.2 billion ISK and is credited to owners' equity. Additionally, owners' equity is increased by 3.4 billion ISK since the fixed assets relating to the distribution of power were revalued at the end of 2004. These assets will be transferred to Landsnet hf as at the beginning of 2005. The revaluation is based on the evaluation of a special committee charged with the responsibility of valuing the distribution assets in the electric energy sector pursuant to provisions in the energy law.

The investment in long-term fixed assets, amounting to 20.8 billion ISK in 2004, was financed primarily by new long-term debt which increased by 19 billion ISK. The investment in the Karahnjúkar project amounted to 18 billion ISK in 2004 as compared with 13.8 billion ISK in 2003.

Landsvirkjun is a partnership half of which is owned by the Government of Iceland and the other half by the City of Reykjavik (44.5%) and the Township of Akureyri (5.5%). The board of directors will propose a cash dividend to the owners for 2004 based on the law governing the operation of the company. If the proposal is accepted, cash dividend in the amount of 394 million ISK will be paid in 2005 based on the ownership shares. In 2004 the company paid to the owners a fee in the amount 241 million ISK for guarantees provided on long-term debt. For other information, the board directs the reader's attention to the notes accompanying the financial statements.

The Board of Directors and the Managing Director hereby confirm that the consolidated financial statements are prepared in conformity with applicable laws and regulations regarding the preparation of annual financial statements.

Reykjavik, March 9th. 2005

Board of Directors:

Jóhannes Geir Sigurgeirsson

Álfheidur Ingadóttir  
Edda Rós Karlsdóttir  
Helgi Hjörvar

Kjartan Gunnarsson  
Kristján Thór Júlíusson  
Vilhjálmur Th. Vilhjálmsson

Managing Director:

Fridrik Sophusson

## Auditor's report

To the Board of Directors of Landsvirkjun

We have audited the accompanying balance sheet of Landsvirkjun as of December 31, 2004, and the related statement of income and statement of cash flows for the year then ended. These financial statements are the responsibility of the company's management. Our responsibility is to express an opinion on these financial statements based on our audit.

We conducted our audit in accordance with generally accepted auditing standards. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by man-

agement, as well as evaluating the overall financial statements' presentation. We believe that our audit provides a reasonable basis for our opinion.

In our opinion, the financial statements give a true and fair view of the financial position of Landsvirkjun as of December 31, 2004, and the results of its operation and its cash flows for the year then ended, in accordance with the law and generally accepted accounting principles.

Reykjavík, March 9th. 2005

KPMG Endurskoðun hf.  
Jón Eiríksson  
Sigríður Helga Sveinsdóttir



# Income statement 2004

	Note	Consolidated		Parent Company	
		2004	2003	2004	2003
<b>Operating revenues</b>					
Power sales . . . . .	2	13,542,623	12,773,881	13,542,623	12,773,881
Sale of steam from geothermal wells		17,037	22,434	17,037	22,433
Other income . . . . .		141,366	67,158	63,992	25,313
<i>Total operating revenues</i>		<u>13,701,026</u>	<u>12,863,473</u>	<u>13,623,652</u>	<u>12,821,627</u>
<b>Operating expenses</b>					
Energy production costs . . . . .		2,483,641	2,326,789	2,569,488	2,395,335
Transmission costs . . . . .		857,552	807,399	897,218	813,694
Cost of general research . . . . .		355,462	346,937	355,462	346,937
General administrative expenses . . .	20	994,641	1,016,395	926,947	987,647
Depreciation . . . . .	3,10	5,346,909	5,274,491	5,249,532	5,226,393
<i>Total operating expenses</i>		<u>10,038,205</u>	<u>9,772,011</u>	<u>9,998,647</u>	<u>9,770,006</u>
<i>Operating profit</i>	21	<u>3,662,821</u>	<u>3,091,462</u>	<u>3,625,005</u>	<u>3,051,621</u>
<b>Financial costs</b>					
Interest revenues . . . . .		149,392	108,000	148,532	100,751
Interest expenses . . . . .		( 3,320,297)	( 2,907,579)	( 3,297,717)	( 2,883,304)
Exchange-rate gains and hedging . . .		6,703,334	1,259,517	6,695,855	1,265,416
Net profit of subsidiary companies . .	11	<u>0</u>	<u>0</u>	<u>23,575</u>	<u>16,916</u>
	8	<u>3,532,429</u>	<u>( 1,540,062)</u>	<u>3,570,245</u>	<u>( 1,500,221)</u>
Net profit. . . . .	18	<u>7,195,250</u>	<u>1,551,400</u>	<u>7,195,250</u>	<u>1,551,400</u>

All amounts are in ISK thousand.

# Balance sheet as at December 31, 2004

## Assets

	Note	Consolidated		Parent Company	
		2004	2003	2004	2003
<b>Property, plant and equipment</b>					
<b>In operation</b>					
Power stations . . . . .		84,844,342	87,541,135	84,844,342	87,541,135
Transmission system . . . . .		22,492,272	20,188,429	22,492,272	20,188,429
Telecommunication equipment . . . . .		623,775	519,828	0	0
Vehicles, equipment and dredger . . . . .		207,558	205,554	207,559	205,554
Office buildings and equipment . . . . .		<u>1,723,108</u>	<u>1,703,778</u>	<u>1,713,108</u>	<u>1,703,778</u>
<i>Total in operation</i>	9	<u>109,891,055</u>	<u>110,158,724</u>	<u>109,257,281</u>	<u>109,638,896</u>
<b>Construction and research</b>					
Development costs . . . . .	4	1,964,156	2,325,498	1,964,156	2,325,498
Projects under construction . . . . .	22	<u>35,601,559</u>	<u>16,346,186</u>	<u>35,601,559</u>	<u>16,346,186</u>
<i>Total construction and research</i>		<u>37,565,715</u>	<u>18,671,684</u>	<u>37,565,715</u>	<u>18,671,684</u>
<b>Shares and long-term notes receivable</b>					
Wholly owned subsidiaries . . . . .	11	0	0	364,269	355,609
Shares in other companies . . . . .	11	68,845	132,183	66,044	41,483
Long-term notes receivable . . . . .		<u>271,601</u>	<u>282,534</u>	<u>271,601</u>	<u>245,967</u>
<i>Total shares and long-term notes receivable</i>		<u>340,446</u>	<u>414,717</u>	<u>701,914</u>	<u>643,059</u>
<i>Total property, plant and equipment</i>		<u>147,797,216</u>	<u>129,245,125</u>	<u>147,524,910</u>	<u>128,953,639</u>
<b>Current assets</b>					
Accounts receivable - trade . . . . .		2,362,133	1,732,278	1,729,775	1,628,421
Accounts receivable - other . . . . .		1,094,288	667,856	1,089,310	662,460
Inventories (oil) . . . . .		33,847	33,958	33,847	33,958
Cash and bank deposits . . . . .		<u>3,397,269</u>	<u>2,848,697</u>	<u>3,235,716</u>	<u>2,718,240</u>
<i>Total current assets</i>		<u>6,887,537</u>	<u>5,282,789</u>	<u>6,088,648</u>	<u>5,043,079</u>
<b>Total assets</b>		<u>154,684,753</u>	<u>134,527,914</u>	<u>153,613,558</u>	<u>133,996,718</u>

## Liabilities and owners' equity

	Note.	Consolidated		Parent Company	
		2004	2003	2004	2003
<b>Owners' equity</b>					
Owners' contribution . . . . .		30,260,455	27,450,328	30,260,455	27,450,328
Retained earnings . . . . .		<u>21,116,471</u>	<u>13,729,883</u>	<u>21,116,471</u>	<u>13,729,883</u>
<i>Total owners' equity</i>	12	<u>51,376,926</u>	<u>41,180,211</u>	<u>51,376,926</u>	<u>41,180,211</u>
<b>Obligations</b>					
Accrued pension obligation . . . . .	13	<u>1,778,737</u>	<u>1,691,156</u>	<u>1,777,169</u>	<u>1,691,156</u>
<b>Long-term liabilities</b>					
Long-term liabilities . . . . .	5,14	<u>92,233,553</u>	<u>85,107,365</u>	<u>91,929,352</u>	<u>84,745,059</u>
<b>Current liabilities</b>					
Accounts payable . . . . .		3,501,410	2,524,071	2,780,096	2,399,053
Wholly owned subsidiary . . . . .		0	0	16,822	20,050
Accrued interest payable . . . . .		1,096,950	1,072,559	1,096,950	1,070,404
Current maturities og long-term liabilities .	15	<u>4,697,177</u>	<u>2,952,552</u>	<u>4,636,243</u>	<u>2,890,785</u>
<i>Total current liabilities</i>		<u>9,295,537</u>	<u>6,549,182</u>	<u>8,530,111</u>	<u>6,380,292</u>
<i>Total liabilities</i>		<u>103,307,827</u>	<u>93,347,703</u>	<u>102,236,632</u>	<u>92,816,507</u>
<b>Total liabilities and owners' equity</b>		<u>154,684,753</u>	<u>134,527,914</u>	<u>153,613,558</u>	<u>133,996,718</u>

All amounts are in ISK thousand.

# Statement of cash flows in 2004

	Note	Consolidated		Parent Company	
		2004	2003	2004	2003
<b>Operating activities</b>					
Cash received from customers .....		13,633,483	13,042,531	13,539,619	12,895,602
Cash expenses .....		( 4,264,439 )	( 4,584,625 )	( 4,332,367 )	( 4,514,192 )
		9,369,044	8,457,906	9,207,252	8,381,410
Interest income .....		149,392	108,000	148,532	100,751
Cash payment for interest costs and hedging ..		( 4,896,647 )	( 2,964,426 )	( 4,869,195 )	( 2,941,467 )
	16	<u>4,621,789</u>	<u>5,601,480</u>	<u>4,486,589</u>	<u>5,540,694</u>
<b>Investing activities</b>					
Kárahnjúkar project - power station .....		( 17,963,429 )	( 13,844,080 )	( 17,963,429 )	( 13,844,080 )
Kárahnjúkar project - transmission lines ...		( 737,022 )	( 226,188 )	( 737,022 )	( 226,188 )
Vatnsfell power station .....		( 145,657 )	( 969,993 )	( 145,657 )	( 969,993 )
Refurbishment of substations .....		( 248,823 )	( 310,594 )	( 248,823 )	( 310,594 )
Research and development .....		( 341,491 )	( 852,838 )	( 341,491 )	( 852,838 )
Other capital expenditure .....		( 951,540 )	( 1,415,851 )	( 936,830 )	( 1,363,259 )
Increase (decrease) in paid investments ....		( 364,173 )	876,853	( 364,173 )	876,853
		( 20,752,135 )	( 16,742,691 )	( 20,737,425 )	( 16,690,099 )
(Increase) in long-term investments .....		( 144,563 )	( 134,360 )	( 128,563 )	( 134,360 )
		<u>( 20,896,698 )</u>	<u>( 16,877,051 )</u>	<u>( 20,865,988 )</u>	<u>( 16,824,459 )</u>
<b>Financing activities</b>					
New long-term loans .....		19,037,081	21,588,420	19,034,236	21,438,420
Amortization of long-term liabilities .....		( 1,841,879 )	( 9,999,255 )	( 1,779,595 )	( 9,947,424 )
Increase in share capital .....		5,911	0	0	0
Cash dividend .....		( 357,766 )	( 350,046 )	( 357,766 )	( 350,046 )
		<u>16,843,347</u>	<u>11,239,119</u>	<u>16,896,875</u>	<u>11,140,950</u>
<b>Increase (decrease) in cash during period .....</b>					
		568,438	( 36,452 )	517,476	( 142,815 )
Translation difference / foreign sub. ....		( 22,045 )	0	0	0
<b>Cash at beginning of year .....</b>					
		2,848,697	2,885,149	2,718,241	2,861,056
Cash of unconsolid. subs. at beg. of year		<u>2,179</u>			
Cash at end of year .....		<u>3,397,269</u>	<u>2,848,697</u>	<u>3,235,717</u>	<u>2,718,241</u>

# Notes to the consolidated financial statements

## Summary of accounting policies

### Basis of financial accounting

1. The financial statements of the company consist of the consolidated financial statements for the parent company and its subsidiaries as well as separate financial statements for the parent company. All significant intercompany transactions and balances between the parent and its subsidiaries have been eliminated on consolidation. Subsidiaries are companies in which the parent company has controlling interest. Control refers to the parent company's ability to have, direct and indirect, significant influence on the subsidiaries' operations including control of their operating policies.

The financial statements are prepared in conformity with the provisions of the Financial Reporting Act and the related regulation regarding the presentation and substance of the financial statements and consolidated financial statements. The financial statements have been prepared in Icelandic króna (ISK) and the figures are presented in thousands of ISK. The financial statements are prepared based on the historical cost convention of accounting as well as the consistency principle except to the extent explained as per note no. 7.

### Revenue recognition

2. Power sales are recognised based on the delivery of power to customers according to recorded measurements during the financial year. If applicable, discounts are netted from revenues. Power sales consist of sales to the ordinary market as well as sales to power-intensive industries. Other service revenue is recorded as earned, and interest income and other revenues which are a function of the passage of time are recorded as earned.

### Property, plant and equipment in operation

3. Property, plant and equipment are stated in the balance sheet at historical cost, except as explained in note 7. The cost of assets acquired prior to year-end 2002 was annually restated based on a revaluation index which reflected general and specific price changes. This annual restatement process was abandoned in 2003 and new fixed assets are now stated in terms of original historical cost without restatement. Depreciation is charged so as to write off the revalued cost or historical cost of assets over their estimated useful life leaving the estimated salvage value, determined as equivalent to one year's depreciation, until the assets are disposed of. The assets are depreciated using the straight-line method based on the following estimates of useful lives:

		Estimated useful life
Power plants		
Construction expenditure, etc. ....	1.67%	60 years
Machinery .....	3.33%	30 years
Apartments .....	2.00%	50 years
Dams and waterways .....	1.67%	60 years
Thermal stations .....	4-5%	20-25 years
Substations .....	3.33%	30 years
Power lines .....	2.78%	36 years
Office buildings .....	2.00%	50 years
Equipment .....	12-25%	4-8 years
Vehicles .....	20.00%	5 years
Research projects .....	12.50%	8 years
Telecommunication equipment .....	5.00%	20 years

### Other fixed assets

4. Expenditures for general research costs are expensed as incurred. Other research costs and various developmental costs for future power projects are capitalized, except that borrowing costs relating to these expenditures are not capitalized. These costs are amortized on a straight-line basis over a period of eight years. This is due to the uncertainty regarding the future use of the research projects. If a research project becomes operational, the remaining book value of the cost is transferred to assets under construction. The choice of one project over another can lead to the postponement or abandonment of other projects.

The borrowing costs of financing are capitalized during the construction cost period. Once the related assets are put into operation the borrowing costs are expensed in the income statement.

### Foreign currency and indexation

5. Monetary assets and liabilities denominated in foreign currencies are converted into ISK based on the rates of exchange prevailing at the end of the year. Liabilities linked to a local price index are stated in terms of accrued indexation at the end of the year, reflecting the price-level as indicated by the index as of January 1st 2005. Revenues and expenses denominated in foreign currencies are recorded based on the exchange rates on the date of transaction. Exchange rate differences and indexation on liabilities are charged or credited to the income statement.

### Derivative financial instruments

6. The gains or losses on derivative financial instruments are recorded in the income statement when incurred. Derivatives used to hedge future transactions are recorded in the financial statements at the same time as the transactions to which they relate. The outstanding amounts of open contracts are shown in note 17.

### Changes in accounting principles

7. The fixed assets used for power transmission were revalued during the year. The valuation was performed by a special committee appointed by the Minister for Industry. The assets in question will be transferred to Landsnet hf as at beginning of 2005. The revaluation amounted to 3.4 billion ISK and it was credited to other owners' equity.

The company will, in order to be consistent with regulations regarding the presentation of financial statements for companies on financial markets within the European Economic Area, use international financial reporting standards for financial statement purposes. Preparatory work for the implementation of the international standards has begun. The effects of those accounting changes on the financial statements have not yet been estimated, but they must by law be put into effect by 2007.

### Financial costs

8. Interest costs, net, consist of the following (ISK million):

	2004	2003
Interest revenues . . . . .	165	119
Tax on interest revenue. . . . .	( 16 )	( 11 )
Interest expenses . . . . .	( 3,707 )	( 2,864 )
Guarantee fee paid to owners . . . . .	( 241 )	( 208 )
Exchange-rate gain and hedging. . . . .	6,704	1,260
Capitalized interest costs. . . . .	<u>627</u>	<u>164</u>
	<u>3,532</u>	<u>( 1,540 )</u>

Expenses and revenues from hedging activities are now recorded amongst financial costs, but were previously added to or netted against sales revenues. This is based on the view that the results of such transactions relate to risk management and financial activities. The net expense for the year amounted to 1.3 billion ISK and the amount is netted from foreign exchange gains. Comparative figures for the preceding year have been changed. The borrowing rate on new long-term liabilities was approximately 2.2% during the year and with the addition of the guarantee fee, the borrowing rate of 2.5% was used to calculate capitalized interest costs on construction projects in progress.

### Property, plant and equipment

9. Property, plant and equipment in operation consist of the following (ISK million):

	Power-stations	Trans-mission system	Communi-cation equipment	Other assets	Total
Costs:					
Balance Jan. 1, 2004 . . . . .	166,945	42,905	774	3,423	214,047
Increase 2004. . . . .	521	218	47	182	968
Retired/sold. . . . .				( 75 )	( 75 )
Revaluation . . . . .		<u>3,381</u>			<u>3,381</u>
	<u>167,466</u>	<u>46,504</u>	<u>821</u>	<u>3,530</u>	<u>218,321</u>
Accumulated depreciation:					
Jan. 1, 2004 . . . . .	79,404	22,717	131	1,514	103,766
Depreciation 2004. . . . .	3,218	1,295	66	149	4,728
Retired/sold. . . . .				( 64 )	( 64 )
	<u>82,622</u>	<u>24,012</u>	<u>197</u>	<u>1,599</u>	<u>108,430</u>
Book value at end of year . . . . .	<u>84,844</u>	<u>22,492</u>	<u>624</u>	<u>1,931</u>	<u>109,891</u>

The official assessment value of fixed assets amounts to 17.5 billion ISK. The insurance value of the same assets amounts to 160 billion ISK.

10. Depreciation in 2004 consists of the following (ISK million):

	2004	2003
Power stations . . . . .	3,218	3,066
Power transmission . . . . .	1,295	1,317
Communication equipment . . . . .	66	48
Other assets . . . . .	149	156
Depreciation on assets in operation . . . . .	4,728	4,587
Share investments written off . . . . .	31	
Other . . . . .	8	9
Capitalized depreciation . . . . .	( 13 )	( 11 )
Research projects . . . . .	593	690
	<u>5,347</u>	<u>5,275</u>

### Long-term investments

11. At the end of 2004, the company owned four subsidiary companies, but during the year two were added, i.e. Íslandsmidill hf and Landsnet hf. Thus, the consolidated accounts comprise the accounts of the parent company and four subsidiaries.

The financial statements of Íslensk jarðhitatækni hf are not included in the consolidated financial statements of the company, since the effects of this subsidiary are immaterial on the consolidated financial statements. The operation of Landsnet hf commences as of the beginning of 2005 at which date the company purchases the transmission system of Landsvirkjun.

The net income of the subsidiaries amounted to 24 million ISK in 2004 and that amount has been credited to the income statement.

The following subsidiaries of the company are included in the consolidated financial statements:

	Percentage share	Par value	Book value
Fjarski ehf . . . . .	100%	250.0	217
Icelandic Power Insurance Ltd . . . . .	100%	USD 0.1	140
Landsnet hf . . . . .	71%	7.1	7
			<u>364</u>

The ownership share of Fjarski ehf in Íslandsmidill hf was 58.4% at the end of 2004. The book value of this investment amounted to 42 million ISK and that amount is included in the parent's investment in Fjarski ehf.

Investments in other companies amounted to 59.8 million ISK during the year. The acquisition of new shares in Tetra Ísland hf cost 50 million ISK, the investment in Vistorka hf cost 4.6 million ISK and the investment in Hecla SAS cost 5.2 million ISK.

The company's other investments are as follows in ISK (million):

	Percentage share	Par value	Book value
Enex hf . . . . .	17.9%	15.9	42
Farice hf . . . . .	1.3%	0.4	1
Hecla SAS . . . . .	30.0%	EUR 0.09	8
Íslensk jarðhitatækni ehf . . . . .	74.0%	0.4	4
Netorka hf . . . . .	15.7%	5.2	9
Sipenco GmbH . . . . .	25.0%	CHF 0.06	3
Tengir hf . . . . .	6.0%	2.4	2
Tetra Ísland hf . . . . .	22.3%	50	50
Vistorka hf . . . . .	10.7%	6.9	25
			<u>144</u>
Allowance account . . . . .			( 75 )
			<u>69</u>

The company has not used the equity method of accounting for the above investments despite its holdings being greater than 20% due to the fact that those investments would have had insignificant influence on the financial statements.

An allowance account in the amount of 75 million ISK was set up at the end of 2004 due to the uncertainty of the financial position of the companies involved, most of which are high-risk projects.

### Owners' equity

12. The capital account consists of the following (ISK million):	2004	2003
Balance at 1 January .....	41,180	39,979
Cash dividend .....	( 357 )	( 350 )
Revaluation of transmission system .....	3,381	0
Translation difference on foreign subsidiary .....	( 22 )	0
Net profit .....	<u>7,195</u>	<u>1,551</u>
Balance at 31 December .....	<u>51,377</u>	<u>41,180</u>

Based on the agreement dated 1981 with reference to subsequent amendments to that agreement, the capital contributions amounted to ISK 14 billion in terms of year-end prices in 1995. The capital contributions restated to reflect changes in price levels to the end of 2004 amounted to ISK 20,758 million. The partnership agreement stipulates that dividends shall be 5.5% of the restated capital contributions and the balance for accrued dividends. Cash payments for dividends are based on certain operating indicators, i.e. profit before depreciation and interest charges on long-term debt. Undistributed accrued dividends amounted to ISK 9,502 million at the end of 2004 and the maximum amount that can be paid in the year 2004 based on the requirements of the partnership agreement is ISK 394 million. Accordingly, the owners' equity consists of the following balances (ISK million):

Restated capital contributions .....	20,758
Undistributed accrued dividends .....	<u>9,502</u>
	30,260
Retained earnings .....	<u>21,117</u>
	<u>51,377</u>

### Pension obligations

13. The company's obligation to refund the indexation charges on retirement payments to current and former employees amounts to 1,778 million ISK at the end of 2004 based on actuarial estimate. The calculation takes into account estimates of future changes in compensation levels and price levels. The real discount rate is 3.5% and on average the increase in salaries in excess of price-level changes is expected to be 1.5% annually. Assumptions on mortality rates and other relevant estimations are in conformity with the provisions of the regulation (no. 391/1998) governing such calculations for pension funds. The retirement age is 68 years for current employees and 65 years for non-employees with vested benefits; this is consistent with the relevant pension funds' regulations.

### Long-term liabilities

14. Long-term liabilities are translated at rate of exchange prevailing at the end of the year. They are in the following currencies (million):

	Foreign amount	ISK	Indexation exchange-rate gain (losses)
U.S. dollars .....	408.3	25,203	4,139
Euro .....	613.4	51,663	3,527
Icelandic króna .....		8,728	( 305 )
Japanese yen .....	5,014.9	3,002	345
Pounds sterling .....	70.4	<u>8,335</u>	<u>619</u>
		96,931	<u>8,325</u>
Current maturities of long-term liabilities .....		<u>4,697</u>	
		<u>92,234</u>	

The nominal interest rates on outstanding debt are from 0.1% to 14.5%. The average nominal interest charges were 4.0% for the year 2004 as compared with 3.5% for the previous year.

The company has entered into cross-currency swap agreements in order to limit its risk exposure for currency changes and interest costs. The break-down of the long-term debt takes into account the swap agreements made, and which also applies to interest cost on those contracts. The owners of Landsvirkjun provide a guarantee of collection on the long-term liabilities of the company.

15. The following is a maturity schedule as per loan agreements for long-term debt over the next five years:

	Consolidated
2005 .....	4,697
2006 .....	12,800
2007 .....	1,000
2008 .....	7,286
2009 .....	1,500
Later .....	<u>69,648</u>
	<u>96,931</u>

This payment schedule will change through refinancing measures in accordance with the company's policy of retirement of long-term debt.

### Statement of cash flows

16. Cash flow from operating activities is a good indicator of the company's ability to repay liabilities. The statement of cash flows is particularly useful when comparative figures for several years are presented. For this purpose the following table shows the cash flows from operating activities for the last four years (ISK million):

	Consolidated		Parent company	
	2004	2003	2002	2001
Net profit (loss) .....	7,195	1,551	5,729	( 1,839 )
Reconciling adjustments:				
Depreciation and assets written off. ....	5,387	5,437	5,261	5,487
Gain on sale of assets. ....	( 10 )			
Exchange-rate adjustments net. ....	( 8,298 )	( 1,129 )	( 4,817 )	1,413
Working capital provided by operations .....	4,274	5,859	6,173	5,061
Changes in components of working capital				
Decrease (increase) in current assets. ....	( 64 )	( 168 )	176	37
Increase (decrease) in current liabilities ...	412	( 90 )	83	444
Cash provided by operation .....	<u>4,622</u>	<u>5,601</u>	<u>6,432</u>	<u>5,542</u>
Cash provided by operation as a percentage of long-term liabilities. ....	<u>4.8%</u>	<u>6.4%</u>	<u>8.3%</u>	<u>6.1%</u>

### Risk management

17. The company uses derivative financial instruments in its risk management for hedging purposes as well as for trading (speculative) purposes. The company uses primarily forward contracts, interest-rate and foreign debt currency swaps as well as options.

The financial risk the company has to manage is of three types. Firstly, the risk of changes in the world market price of aluminium, since a substantial part of the company's revenues are linked to the price of aluminium. Secondly, risk associated with interest rates on the company's financing, and thirdly, the risk related to foreign currency fluctuations on foreign denominated debt and revenues linked to foreign currencies.

The purpose of using derivative financial instruments must be decided beforehand. The contracts to manage risk are made with the purpose of reducing the negative impact of current fluctuations on net income, and/or the future fluctuations due to changes in the price of aluminium, interest rates or foreign currencies.

It is the company's long-term policy to effectively hedge 50% of the risk associated with changes in the world market price of aluminium, and to maintain fixed interest rates for one half of the long-term debt. It is also the company's aim in risk management to minimize the effects of foreign currency fluctuations on net income.

The financial reporting act requires that information be provided on the fair value of outstanding derivative contracts to the extent that they are not recorded as assets and liabilities at fair value, and such information follows. Fair value represents the amount for which an asset could be sold or liability settled in a transaction between informed and unrelated parties.

The company has entered into cross-currency swaps on long-term debt and the net negative fair value is approximately 287 million ISK whereas the book value of the related assets and liabilities is 278 million ISK. The underlying notional amounts in these contracts is approximately 10 billion ISK at the end of 2004.

The interest rate swap contracts the company as entered into are mainly for the purpose of converting variable rates into fixed rates. The net negative fair value of the contracts outstanding at the end of 2004 amounts to 295 million ISK, while the underlying notional amounts are approximately 32 billion ISK.

The company has entered into forward contracts for the purchase and sale of foreign currencies, some of which contain knock-out provisions. The net negative fair value of these contracts at the end of 2004 amounts to 36 million ISK, while the underlying notional amounts are approximately 3 billion ISK.

The company has option contracts outstanding which were entered into in order to hedge sales revenues. The mark-to-market valuation of the contracts was negative in the amount of 2.5 billion ISK at the end of 2004 based on information provided by the counterparties. The fair value takes into account the present value of estimated cash flows based on forward prices taking into consideration applicable optionality provisions.

## Other notes

### 18. Semi-annual summary:

The Group's operations are specified as follows semi-annually:

	1.1.-30.6.	1.7.-31.12.	Total
Operating revenues . . . . .	<u>6,839</u>	<u>6,785</u>	<u>13,624</u>
Operating expenses excluding depreciation . . . . .	2,265	2,484	4,749
Depreciation . . . . .	2,596	2,654	5,250
Financial costs . . . . .	<u>2,623</u>	<u>( 6,193 )</u>	<u>( 3,570 )</u>
	<u>7,484</u>	<u>( 1,055 )</u>	<u>6,429</u>
Net profit. . . . .	<u>( 645 )</u>	<u>7,840</u>	<u>7,195</u>
Net cash provided by operating activities. . . . .	<u>2,694</u>	<u>1,928</u>	<u>4,622</u>

### 19. The Group paid ISK 1,902 million in salaries to employees; related expenses and pension payments amounted to ISK 515 million or in total ISK 2,417 million.

Remuneration to the Board of Directors and Executive Management amounted to ISK 97.6 million.

### 20. General administrative expenses of the parent company consist of the following:

	2004	2003
Corporate office . . . . .	260	247
Finance . . . . .	208	190
Human resources. . . . .	71	76
Information technology . . . . .	122	119
Engineering . . . . .	<u>( 40 )</u>	<u>( 59 )</u>
Pension payments . . . . .	189	149
Provision for shares and written-off assets . . . . .	40	162
Marketing unit. . . . .	0	49
Common costs. . . . .	<u>77</u>	<u>55</u>
	<u>927</u>	<u>988</u>

21. In conformity with the provisions of energy laws, the company has prepared a segmental analysis of its operations. The analysis is based on rules for the allocation of common costs and expenses. The segmental presentation of the income statement for the parent company is as follows:

	Production	Transmission	Total
Operating revenues . . . . .	10,458	3,165	13,623
Operating expenses . . . . .	7,445	2,553	9,998
Income from operation (ebit) . . . . .	3,013	612	3,625
Return on assets employed . . . . .	3.50%	3.10%	3.42%

Total revenues are split between power production and transmission. The revenues for transmission are based on tariffs set by the Regulator; the power production revenues being the remainder.

22. The construction of the hydropower project at Kárahnúkar started in 2003 after contracts for delivery of electrical power were entered into with Fjarðaál, a subsidiary of Alcoa. The power station's capacity will be 690 MW and transmission lines will be erected to Reydarfjörður. The current estimate is for the first generating unit to commence operation in 2007. Further information on the project can be found at the power project's website, [www.karahnjukar.is](http://www.karahnjukar.is). At the end of 2004 the accrued construction cost amounted to 35 billion ISK.

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