An in-depth study of the macroeconomic impact of proposed aluminium-related investments and possible economic policy responses to them was included in *Monetary Bulletin* in February this year. That analysis did not take into account the planned expansion of the Norðurál smelter, but was confined to construction of the Alcoa (Fjarðaál) smelter in east Iceland and Landsvirkjun's hydropower station at Kárahnjúkar which will supply it with electricity. The macroeconomic forecast in the May *Monetary Bulletin* incorpo-



plans to make a power agreement with Norðurál. Instead, Reykjavík Energy and Suðurnes Regional Heating (Hitaveita Suðurnesja) will supply the required electricity for expanding production capacity at the smelter at Grundartangi by 90 thousand tonnes per year. Preparations are making good progress, both for the expansion itself and towards a final agreement with the prospective power supplier. A number of issues remain to be finalised, however, and a final decision on whether the expansion will go ahead will be made in the beginning of 2004. Total cost of the expansion project is estimated at almost 24 b.kr., largely spread over 2004 and 2005. Foreign procurement is expected to account for 62% of the total investment and domestic procurement 38%. The expanded smelter is planned to go on stream in spring 2006, bringing Norðurál's total production capacity up rated the Norðurál expansion and accompanying investment in power facilities. So did the macroeconomic forecast published in *Monetary Bulletin* in August. The current macroeconomic forecast, however, once again only takes into account the Fjarðaál and Kárahnjúkar projects.

There have been considerable changes since the analysis in the February *Monetary Bulletin*, although most of the fundamentals are the same. Most significantly, in the summer Landsvirkjun abandoned its



to 180 thousand t.p.y. The construction cost of power generating facilities will be roughly the same as the cost of the smelter expansion, or 23 b.kr., spread over 2004-2006. The main change from the earlier cost schedule is that construction activity will peak at a lower level in 2005 and be spread in part to 2006. The estimated labour requirement for the power station project is 700 man-years, 85% of which will be met domestically. Foreign procurement is expected to amount to 57% of the total.

Construction of the Kárahnjúkar power station is in full swing and the investment this year is estimated at 13.5 b.kr. Construction activity will peak in 2005 and 2006, with investments of 23 and 25 b.kr. respectively. The project will largely be concluded in 2007. Estimated breakdown of the total investment is 45% procured domestically and 55% from abroad. Total manpower requirement for the Kárahnjúkar power station is estimated at roughly 3,500 man-years, of which 53% is expected to be foreign labour and 47% domestic.¹ This autumn, 850 people are employed on the project, of whom 550 (65%) are foreigners. Estimated distribution of cost over the construction period remains broadly unchanged. Some 2/3 of total costs will be incurred over the period 2004-2006, and more than half in 2005 and 2006.



Total construction cost for the Fjarðaál smelter is estimated at 87 b.kr. and will mostly be spread over the period 2005-2007. Activity will be most intense in 2006 and 2007 when 85% of construction cost will be incurred. Domestic procurement is expected to amount to 40% of the total investment and foreign procurement 60%. The total labour requirement is estimated at 2,200 man-years, with a 70% domestic component. According to current schedules, Fjarðaál will reach full production capacity in autumn 2007.

Rescheduling of project phases and the lower peak in construction activity implies that the aluminiumrelated investments in east Iceland will represent a smaller proportion of GDP than was previously estimated. At the peak in 2006, the cost will be equivalent to just over 6% of estimated GDP that year, and just under one-quarter of gross fixed capital formation. The labour requirement will be 1.3% of the total labour force that year. If both the east Iceland programme and the Norðurál expansion go ahead over the next few years, the total investment will amount to 220 b.kr. Activity will peak then in 2005 and 2006 when the cost will be equivalent to 7%-8% of GDP for each year.

As Chart 3 shows, the main divergence from earlier plans for the Norðurál and Fjarðaál projects is that the peak shifts from 2005 to 2006 and some investment is delayed until 2007.

Total construction cost for the Fjarðaál smelter is estimated at 87 b.kr. and will mostly be spread over the period 2005-2007. Activity will be most intense in 2006 and 2007 when 85% of construction cost will be incurred. Domestic procurement is expected to amount to 40% of the total investment and foreign procurement 60%. The total labour requirement is estimated at 2,200 man-years, with a 70% domestic component. According to current schedules, Fjarðaál will reach full production capacity in autumn 2007.

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The macroeconomic forecast assumes a 40% foreign contingent in the labour force on the Kárahnjúkar project. The data in this box are more recent than those used in the macroeconomic forecast and were not available at the time it was made. Only a minor change in assumptions is involved, however, with an insignificant impact on the macroeconomic forecast result.