EIR Feature

A program to rescue Poland and secure peace

by EIR Economics Staff

This winter Poland faces a devastating crisis, a crisis which on one level threatens the existence of the country, and on another, if that crisis is not successfully addressed, the very existence of humanity, in war arising out of spreading economic breakdown and political turmoil in Eastern Europe.

The crisis is the result of an overall global financial and economic crisis, fueled, on the one side, by the accelerating economic breakdown of the Russian and Soviet collectivist system, and on the other side, by the de facto bankruptcy of the dollar-based world credit system, and accelerating economic slide into depression in the West. The latter, the cumulative effect of 25 years of slide into the utopia known, in the United States, as the "post-industrial society" compounded in recent years by the liberals' monetarist insanities, in the name of Friedmanism or Thatcherism.

To get out of this twofold breakdown crisis, a new approach is needed. More precisely, not a new approach, but a return to the methods of economic policy which have proven themselves over the course of modern European history since the Golden Renaissance, in opposition to the liberals and the monetarists, as well as the communist collectivists.

Currently that new method is best associated with the work of the jailed U.S. politician and physical economist Lyndon H. LaRouche. LaRouche is the author of what is called the LaRouche-Riemann method of physical economy, the application of the mathematical physics of Gauss, Riemann, Cantor, and Beltrami to the method of economics associated with Gottfried Leibniz, and the creators of the American, or National, System of economics.

LaRouche has proposed that the needed approach be called "the Third Way." In his usage, the term "Third Way" signifies something which in a sense lies between the two extremes of evil, bolshevism and Thatcherism, and which is also opposite to the bankers' socialist form of fascist or corporativist economy which is generally popular among Anglo-American and some other sections of the Socialist

A food line in Poland, summer 1989. Solidarnosc leader Lech Walesa (inset) has warned repeatedly, since the Solidarnosc-led government came to power last August, that political catastrophe looms if substantial economic assistance is not quickly forthcoming from the West. The program presented here is urgently required—not the crushing austerity measures now being applied, at the behest of the International Monetary Fund.

International today. In a more positive sense, it means the alternative to, and opponent of, Thatcherism, the dogmas of Adam Smith, and so forth; it is known as the American System of Political Economy, so identified by U.S. Treasury Secretary Alexander Hamilton, and otherwise associated with Henry and Mathew Carey and with Friedrich List. It also means, in a broader sense, the physical economy of Gottfried Leibniz, which is our own adoption, the LaRouche-Riemann method in economic analysis or physical economy, and which is also, in a broad sense, the tradition of Colbert and of the cameralists generally.

This "Third Way" fosters increases in potential relative population density, by fostering those advances in technology which will increase productivity, measured per capita and per hectare, while promoting the broad development of infrastructure, power systems, transportation, water management, communications, which are proven to support the necessary rates of increase in technological advance.

The point is, the Third Way as we identify it, the American System and what it symbolizes, will work, will succeed—the American System, which Germans know as the tradition of Friedrich List. The alternatives, Thatcherism, bolshevism, and bankers' socialism, which is bankers' corporatism, will be a tragedy possibly for the entire human race, possibly for many generations to come.

Like other nations in Eastern Europe, Poland has been caught between the two, incurring debt in the West to finance projects for the benefit of the Russians, seeing capital assets stripped out and depleted, to be then handed over, after the national economy has been bled dry, to rapacious Western financial insistence on maintaining the stream of debt service.

France's President François Mitterrand has recently proposed the adoption of what he called a "Third Way" between the failures of Russian collectivism and Thatcherite neo-liberalism, a "Third Way" based on cooperation and mutual interest. The Federal Republic of Germany's Chancellor Helmut Kohl has put forward a 10-point program for intra-German economic cooperation, under which commissions would be formed, from the Federal Republic and the German Democratic Republic (G.D.R.) to study ways in which cooperation and integration might proceed.

This winter, it is proposed, Poland ought to be the subject of such discussions, and the recipient of their benefits. If intra-European cooperation, over this winter, can save Poland, then an alternative can be put forward to save the world from the consequences of the failures of both the communist collectivists' and the Western liberal monetarists' insanities.

Chancellor Kohl and President Mitterrand have put forward the idea of improving east-west rail links. From his cell in Rochester, Minnesota, jailed U.S. physical economist Lyndon LaRouche has proposed an emergency effort to reopen and upgrade rail links, along the artery Paris to Warsaw, to the end of delivering Poland the means by which the disasters looming this winter might be averted. Out of such an effort, Eastern Europe's plunge into deepening economic chaos and political turmoil could be reversed, to the benefit of all.

Helping Poland out of its winter crisis would then become the crucial experiment which proves definitively the superiority of the "Third Way," based on the application of Western

culture's conception of the sanctity of every human life, as absolutely different from that of the lower beasts, and the defense of the related Western system of the sovereign nation state. And related ideas, which from the time of St. Augustine have defined the absolute superiority of Western scientific and technological progress-based cultures over all others.

This is the tradition associated in the physical sciences with Cardinal Nicolaus of Cusa and Leibniz, and in economics with Leibniz, the mercantilism of Colbert, the cameralism of the Prussian reformers and nation-builders, the national economy of Friedrich List, and the American System of Alexander Hamilton and Mathew and Henry Carey. This is the tradition that can ensure that the disastrous insanities of communist collectivism, and the liberals' monetarism, can be competently replaced. It is also the unique way by which peace might be maintained.

Areas of need

The principal elements of a winter rescue package for Poland should include the following:

1) A debt and financial reorganization package which would eliminate the usurious pressure to maximize hard currency earnings. Restoration of rationality to pricing policies to eliminate the "buy cheap, sell dear" swindles, which ensure that countries like Poland don't receive the fruits of their labor in international trade.

2) Related to the first: an ensured supply of food over the winter months.

3) Emergency efforts to maintain supply of fuel and power, and bulk industrial raw materials, especially where, as in the case of oil, petroleum products, and natural gas, supplies are disrupted by the failure of Gorbachov's so-called *perestroika*.

4) Emergency provision of pharmaceutical supplies and medical equipment.

5) Emergency delivery of spare parts and capital equipment required to restore looted production capability to some degree of functioning, and permit the reopening, or resumption of work, on the capital improvements which have been shut down under the usury regime of the last years.

6) Protection for the production and distribution of construction materials.

7) Preparation, in terms of provision of parts, agricultural machinery and implements, animal feed, and related products, for next spring's planting.

Effect on rail transport system

We have estimated that the transport and delivery of the increased volume of freight required to meet the winter emergency would require more than a 50% increase in the volume of inbound rail-borne freight. Presently, Poland's railroad system carries about 400 million tons annually, of which about 40 million tons is made up incoming freight. The volume of increase on a quarterly basis would be, perhaps, in the order of 5-7 million tons. This means providing for an extra 4,000-6,000 freight trains this winter, or rather more than 60 per day at the higher level. Freight movement to ensure spring planting will roughly double this increase in traffic flow. Therefore, the winter weeks ought also to see efforts to get rail capacities in shape to handle about 120 incoming freight trains per day, roughly double the level which prevailed in 1986.

Most of the increase, so far as bulk goods are concerned, would not involve rail links with the West, but would flow internally, from the Baltic ports of import and transfer, inland. Of the inbound rail-borne freight, only about 6 million tons per annum comes by way of the links over the border crossings between the G.D.R. and Poland. For this winter, supplies of food, raw materials for industry, and fuel, would be shipped into one of Poland's Baltic ports, and then transshipped onto the Polish State Railway (PKP) system. Rail traffic through the G.D.R., from the West, would increase as a function of increased shipments of Western and G.D.R.-supplied spare parts, tools, and capital goods.

The increase can be compared with the PKP's estimates of daily freight traffic. Internally, as of 1985, roughly 4,500 freight trains were employed daily, and another 150 were dispatched for international freight transport. Eighty percent of all the goods carried were bulk goods, and about half of the total moved on a daily basis involved the Upper Silesian industrial area. Collapse of internal freight transport since 1985 would probably have resulted in 350-450 of the country's daily freight train schedule being taken out of service.

To put this in perspective, it should also be kept in mind that almost half of the total of rail-borne incoming freight is iron ore. The iron ore is primarily carried on the line that runs from Hrubieszow on the Soviet-Polish border to Katowice. The line's track gauge is the same as the wide-gauge Russian system, so border transfers are avoided. Iron ore is brought in, products from Silesia's metal- and materials-processing industries are shipped out directly to Russia. Other imported raw materials are shipped into Baltic ports like Szczecin and Koszalin, entry for iron ore from Sweden, and then carried down to the Upper Silesian mining and basic industry region. More than 70% of the outbound rail freight is comprised of coal mined for export in Silesia and hauled by unit train back to the Baltic ports.

By 1986, while the total volume of freight carried on all modes of Polish transportation had reportedly declined by about 35% since the crisis of 1980, the decline in rail freight was only one-third as much—10%—and the decline through the ports was comparable. This margin of unused capacity at the ports, and presumably in classification and marshaling yards, increased during the past year, when the volume of goods carried on Poland's railroads fell by a further 30 million tons. The collapse in goods transported reflects the collapse of the steel industry, and therefore a reduction in iron ore imports, and a reduction in the movement of coal, both

internally and for export. Coal shipments made up 160 million tons, one-third of the total volume carried in the last year. The unused capacity is a primary margin to provide for the necessary expansion of service.

Polish railroads

Within Poland there are 27,000 kilometers of railroad, of which 15,000 are single rail, and 10,000 are fully electrified. In 1986, there were 161,300 rail freight cars; 1,800 electric locomotives; 2,600 diesel locomotives; and 700 steam locomotives. The national average was 7.8 kilometers of railroad per 100 square kilometers. (**Map 1.**)

Kilometers of railroad per 100 square km

Region of Poland	Km of railroad per 100 sq km
Katowice	21.5
Walbrzych	14.5
Warsaw	13.1
Poznan	10.9
Rzeszow	11.3
National Average	7.8

Of the 431 million tons of goods moved by rail in 1986, 25 million tons were exported by land, and 24 million tons were exported by sea; 28 million tons were imported by land; 325 million tons were moved as "local traffic."

Speed of freight train

(kilometers per hour)

Year	Total	Electric	Diesel
1986	39.9	43.5	34.6
1985	39.9	43.8	34.9
1980	38.0	43.8	34.6
1970	37.4	47.3	38.9

Speed has probably fallen since 1986. There has reportedly been a noticeable deterioration in the track bed, following a sharp drop in investment for maintenance, etc. since 1986. The state rail plan adopted in 1986 envisioned that transit from Rzepin on the western border crossing with the G.D.R. to Malaszewicze on the eastern Soviet border would take 20 hours, the north-south route from Gdynia to Zebrzydowice 24 hours, and the journey from Szczecin into Upper Silesia around 20 hours.

The main line (Poznan-Warsaw) from the G.D.R. border is a double line, and is fully electrified. The following rail lines are important, and are also fully electrified: Warsaw to Krakow; Warsaw to Katowice; Szczecin to Silesia; Gdynia/Gdansk to Warsaw; Gdynia/Gdansk to Wloclawek. (**Map 2.**)

The line that runs from Cottbus in the G.D.R. to Wroclaw is *not* electrified. Rail lines in Czechoslovakia are also not electrified.

MAP 1

Poland's railway system

Poland's freight trains average about 1,300 tons carried per journey, over a 280-km run. Hence the estimated total requirement for extra freight trains required over the winter months is in the range of 4,000-6,000. The average wagonload is about 36 tons, the daily run per wagon about 104 km, and the turnaround time for wagons just over five days. On this profile, it would take two freight trains four days to carry one trainload of freight between Frankfurt, on the Polish-German border, and Warsaw. (See **Map 3.**)

Rail routes into Poland

The principal rail route into Poland is of course the direct one from Warsaw, through Berlin to Hanover. There are subsidiary southern routes, from Warsaw, through Wroclaw and Katowice, via Dresden, Prague, and Bratislava respectively, to Munich and Vienna. (See **Map 4.**)

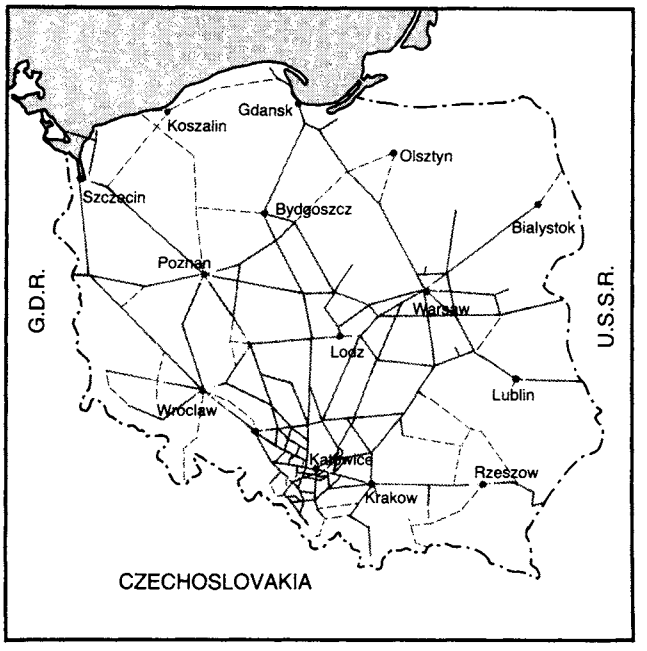
Bottlenecks

Increasing the volume of freight carried into Poland is first to increase the frequency of the traffic. On one side, this means re-establishing broken links, especially those between the Federal Republic (F.R.G.) and the G.D.R., as the respective governments have begun to do. On another, it means upgrading existing track.

The big bottleneck to overcome in expanding the freight moved into Poland by rail from the west, is the G.D.R. Within the G.D.R. the bottlenecks, up to now, have been of two forms—political as well as physical. The main physical

MAP 2

Electrification of Poland's railroads



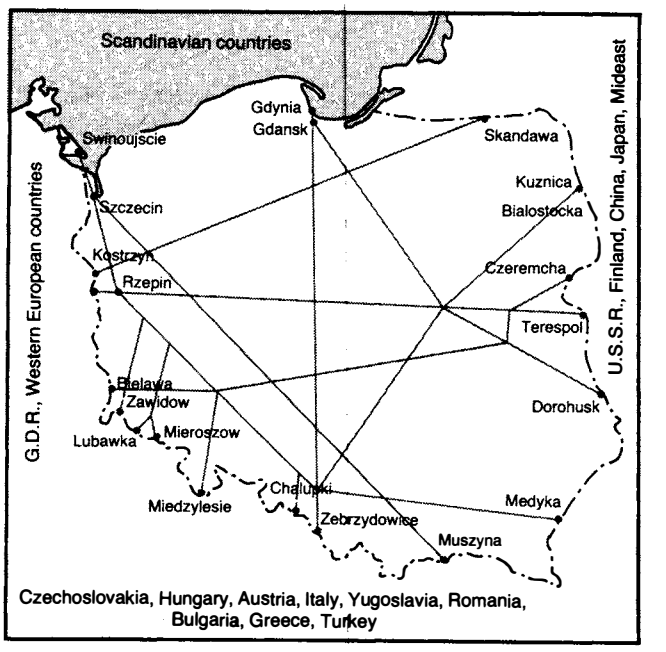
—— Lines electrified before 1985

— — Lines planned to be electrified 1986-90

Polish State Railway

MAP 3

Major routes of rail freight through Poland



Polish State Railway

bottlenecks to the movement of goods, tracing their path westward from the Polish-G.D.R. border, are the following (**Map 5**).

First, the principal line into Poland runs from Berlin, through Frankfurt on Oder to Poznan. Double-tracked, like the rest of the line from Berlin, as far east as Chita in Siberia, this line has been accorded, up to now, only the lowest priority for electrification. The electrification of the final stretch was expected to be completed by the end of December 1989, after many years of infighting.

Second, and a problem of a far bigger order, is the one which has developed around Berlin. Prior to the Second World War, Berlin was one of Europe's biggest transport hubs. This obviously is no longer the case. About 15 million tons of freight are delivered to West Berlin by rail every year, coming from the Federal Republic into the Hamburg-Lehrte freight station in central West Berlin. For east-west, and even north-south movement by way of Berlin, the two ring systems, the outer "Aussen-Ring," and the ring which now carries S-Bahn subway passenger traffic for East Germany, have to be put in shape. (See **Map 6**.)

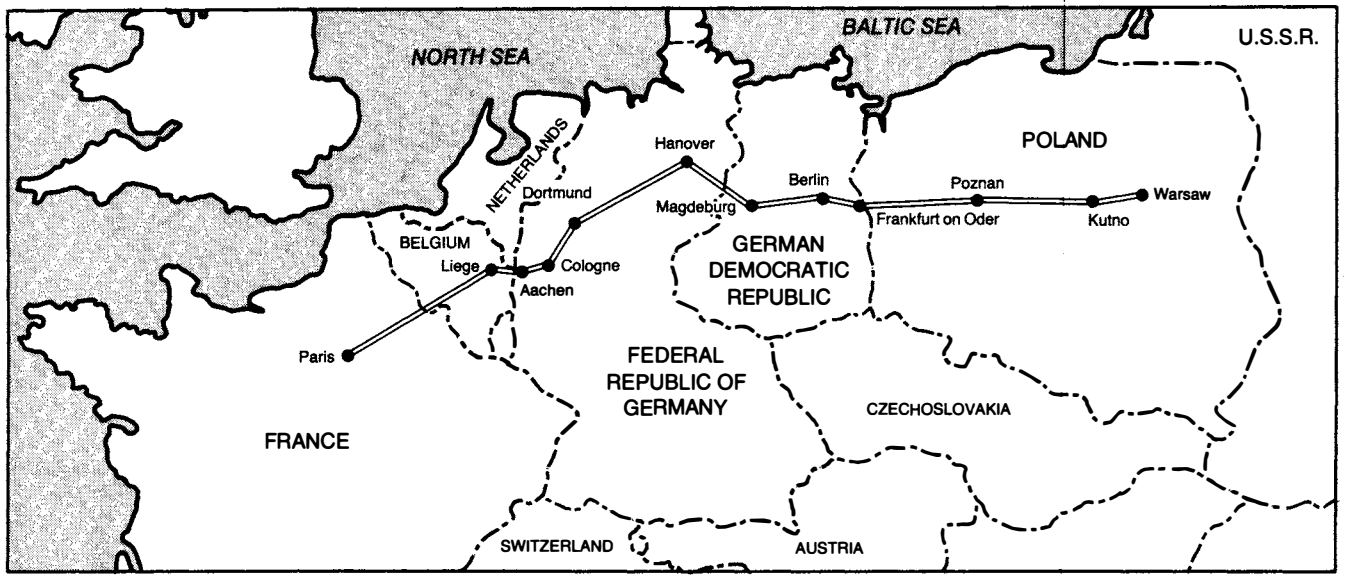
First, they need to be turned back into rings, so that freight can be moved around the city, and not through it. They need to be electrified, around their whole circumferences. Tracks have to be upgraded to standard. And, classification and marshaling systems have to be built, with location and scale depending on how rapidly it is desired to turn Berlin, once again, into a European hub for movement of goods and passengers.

The rail freight center at Machen outside Hamburg, which, handling 4,000 wagons per day, in multi-mode fashion, is now Europe's largest, would be the model for the freight handling centers which will be built around Berlin.

The third bottleneck is the matter of access to Berlin from the west. Traffic coming from the west is restricted to two access routes: a northern one, entering the western side of West Berlin, by way of Nauen, Wustermark, and Spandau, for trains from Hamburg and the north; and, a southern access, on the southwestern side of the city, along the line Potsdam, Griebnitzsee, Wannsee, which seems to be for traffic from all other directions. Map 6 shows the present entry points, as well as cut lines which have interrupted previously existing track. The map also shows the problems with the ring systems.

Fourth is the quality of existing lines linking East Germany with the West. Here, as in and around Berlin, physical bottlenecks stem from political and military considerations. The practice seems to be, as in the crossing Bebra-Gerstungen, a loop back into the territory of the Federal Republic, once the border is crossed, followed by a single-track, non-

MAP 4
The Paris-Warsaw rail corridor

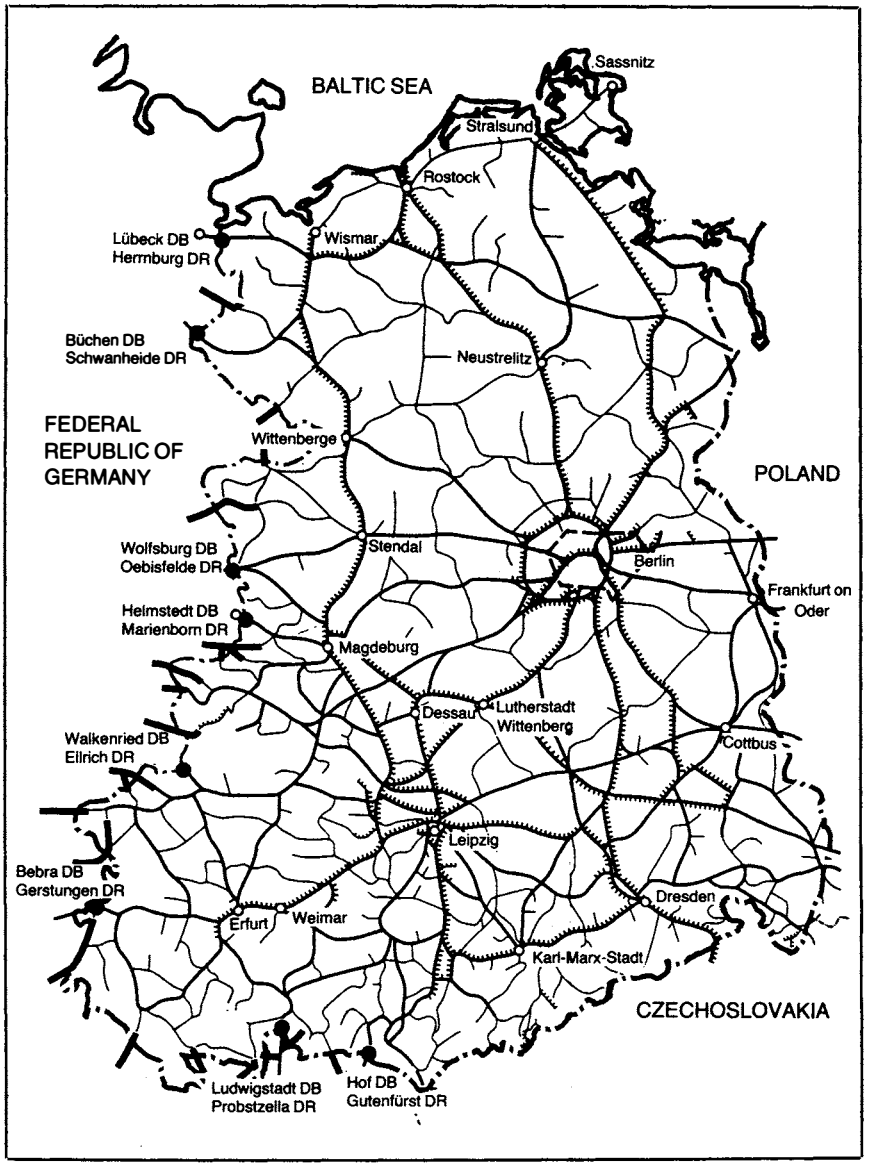


Principal junctions and approximate distances from Warsaw

North link	Direct (distance in km)	South link
Gdynia-Gdansk Bydgoszcz-Szczecin	Warsaw	Krakow-Katowice Lodz-Radom-Lublin
Gdansk-Szczecin Wloclawek	Kutno (80 km)	Katowice-Ostrava-Bratislava-Vienna
Gdansk-Szczecin Bydgoszcz-Gorzow	Poznan (250 km)	Wroclaw-Katowice Wroclaw-Prague-Pilsen-Munich Wroclaw-Dresden-Munich Wroclaw-Dresden-Frankfurt/Main
Szczecin	Frankfurt/Oder (410 km)	Wroclaw
Rostock Bremen-Hamburg	Berlin (480 km)	Erfurt-Stuttgart-Zurich Leipzig-Munich Cottbus-Wroclaw Dresden-Prague
	Magdeburg (570 km)	
	Hanover (730 km)	
Rotterdam	Dortmund (910 km)	
Antwerp	Cologne (1,110 km)	
Brussels	Aachen (1,170 km)	
	Liège (1,230 km)	Thionville Metz-Luxembourg
	Paris (1,400 km)	

MAP 5

G.D.R. railroads, with German-German border crossings



DB=Deutsche Bundesbahn (West German)

DR=Deutsche Reichsbahn (East German)

Electrified lines

Other lines

Lines cut by the border

Idé Infographie

electrified stretch, until the first city, Eisenach, is reached. The line is then electrified until the turn-off for Berlin is made north of Dessau. Existing links have to be double-tracked and electrified.

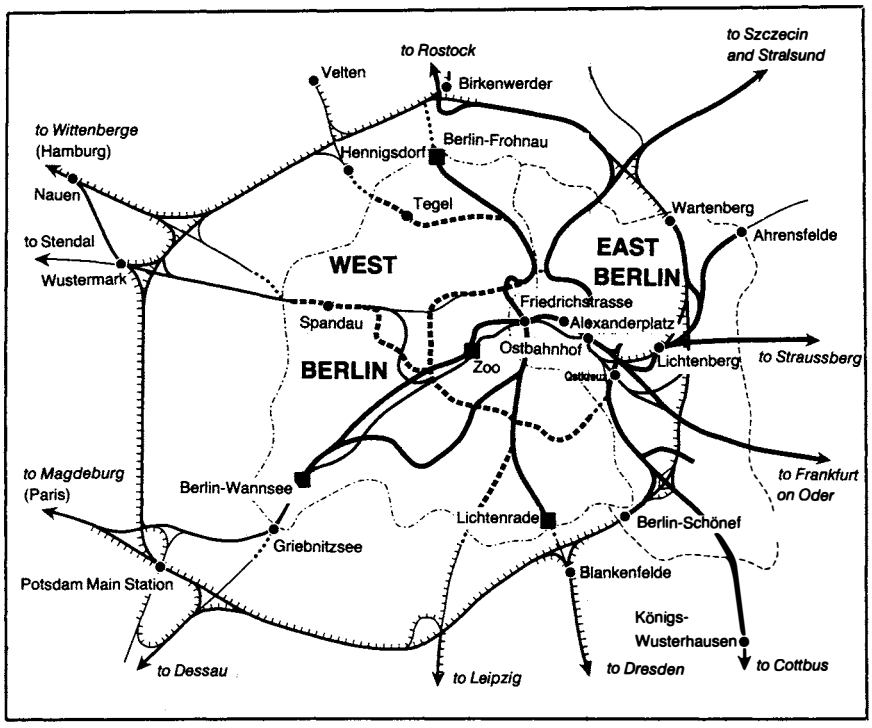
Fifth, rebuilding cut railroad connections, some of which are shown on Map 5. This work has been adopted as a priority by combined task forces of the F.R.G. and the G.D.R. following the Nov. 7, 1989 decision to end visa requirements for travel from east to west. Christmas border opening for west to east travel makes the upgrading more urgent.

Sixth, the physical context for relieving the bottlenecks is defined by the brutal reality that East Germany, unlike West, was never rebuilt after World War II. Where the railroad network is concerned, this means that existing infrastructure—track beds, stations, goods handling, rolling stock repair facilities—actually pre-date the First World War. Steam-driven switching systems, decrepit facilities for steam trains, even if now unused, are not always such silent witness to what has to be done to make the East function. Fix-ups and restoration of broken links ought to proceed from the standpoint that the whole system ought in any case to be rebuilt.

Seventh, expanded passenger travel possibilities following the ending of visa requirements for travel between the Federal Republic and the G.D.R., bring these matters to the immediate forefront. Though travel will not remain at initial elevated levels, there will have to be adopted long-term solutions which integrate both territories, otherwise nothing will

MAP 6

Rail approaches to Berlin



- Major electric lines
- Major non-electric lines
- Other electric lines
- Other non-electric lines
- East Berlin subway
- West Berlin subway
- West Berlin subway lines abandoned or used for freight
- Other abandoned lines

Idé Infographie

work. Given the cheapness of rail transport, economically an order of magnitude advantage for passengers and freight over roads, and given the primitive state of G.D.R. highway networks and facilities, there will be a premium on rapid development of integrated east-west rail links.

The best way to approach this would be to integrate the eastern countries—G.D.R., Poland, Czechoslovakia, Hungary—into the planned western high-speed rail system. Berlin would be the hub for such an extension, with high-speed passenger links radiating in all directions. Existing line segments could then be upgraded for more effective transport of freight.

Eighth, any significant increase in the capacity to move freight eastward into Poland across the G.D.R. will rather soon stress the predominantly north-south-oriented railroad system of the Federal Republic.

Credit and monetary matters

It ought to be recognized by all concerned that Poland cannot continue to sustain the burden of servicing its foreign debt. It ought also to be recognized that Poland's internal credit and pricing arrangements cannot be pulled out of present chaos without reorganizing the foreign debt over 25-30 years, and providing new credit for the development of infrastructure, agriculture, and industry.

The day-by-day and week-by-week labor of Sisyphus to earn hard currency to pay Western creditors and Russian import bills has to be ended, and replaced with efforts to sustain a long-range capital improvement effort which will permit Poland's people to become productive again.

Such a debt reorganization ought properly to be the subject of emergency action taken, as sovereign acts, by the governments which would be directly involved in the effort. What Poland perhaps cannot contemplate on her own, or France or the Federal Republic on their own, becomes possible and urgent, when done together, to preserve peace.

Debt reorganization makes possible the introduction of sanity to foreign exchange and currency policy. That means dropping the monetarists' insistence on full convertibility for the Polish currency, the zloty. There is no way currency convertibility can be put forward as an agenda item, separate from the catastrophic consequences which will ensue from the attempt to make the zloty convertible. There could be no shorter route to the restoration of communist rule than the package of financial measures recommended by Harvard monetarist Jeffrey Sachs and the International Monetary Fund.

Contrary to these bloodthirsty ideologues, Poland's currency is undervalued, and massively so. Poland does not need currency convertibility, but protection, as defined by the 19th-century economists of the American System, with tariffs on imported products, to protect domestic productivity, to permit the necessary capital improvements in infrastructure, agriculture, and industry to achieve critical mass for take-off. Comparison of the economic costs of production of standard market baskets of consumers' and producers'

goods between Poland, the G.D.R., and the Federal Republic would establish that Poland is functioning at about one-sixth the productivity of the Federal Republic, and the G.D.R. at, or under, one-half. Such weightings, as refined, would permit equitable balances to be established for the purposes of trade, and tariff structures, designed not to preserve low productivities, but permit successful investment to reduce the discrepancies in cost along a technology-intensive, energy-intensive pathway.

Debt reorganization, and an economically founded currency stabilization and protectionist tariff screen, should be accompanied by the corresponding introduction of rationality into pricing arrangements.

Changes in pricing policy ought to be effected in coherent fashion, without the influence of Thatcherite "magic of the market place" free enterprise ideology about letting prices find their own levels. Pricing ought to be freed from the usurious and speculative structures tied to the present bankrupt New York- and London-based monetary system. Pricing, as in the case of pricing of agricultural products, what the Americans call the parity system, ought to reflect the economic costs of production, in terms of equipment, material, and labor, while providing for the producers' equitable profit.

This can be approximated by setting a standard for commodity and other product pricing for the Western and Eastern zones which would be participating in the effort to rescue Poland. It is proposed to take the deutschemark import and export prices of commodities and products quoted at Hamburg as the central reference price for all commodities and products shipped through the territories of nations involved in the effort. Thus, Poland would be paid the Hamburg deutschemark price for its exported production. That same price would apply to the nation's imports, and would provide the floor from which tariff arrangements would be calculated.

This would more accurately cover internal Polish production costs than the present "buy cheap, sell dear" swindles organized out of London's commodity exchanges.

Debt reorganization, combined with fair prices for exported goods, would permit Poland to reduce the volume of its exports while maintaining hard currency earnings at or above present levels, without recourse to ultimately self-defeating autarkical approaches. It would help stabilize the situation in the countryside, and permit peasants to start buying inputs again, for example. It would help end the usurious and outrageous looting of Poland's mines, industries, and population.

Reorganizing debt, setting a rational basis for credit and prices, clears the garbage out of the way to permit concentration on what Poland can really do, and what others can do for Poland. Equally, it is important to get rid of the kind of mental images that would tend to get in the way, associated in the United States with the notorious "Polish jokes" or in Europe with so-called "Polish economics."

Prior to 1980, Poland had developed world leadership in areas such as magneto-hydrodynamics (MHD) research. Here the practical benefits, in the form of direct reduction of Poland's enormous coal reserves, would pale into insignificance beside the advances in human knowledge that are waiting to be achieved in the mastery of plasmas and high-energy physics. In the economy, Poland's mining sector—and not just the production side, but the affiliated research institutes, and the mining process machinery sector—were world class. Not so long ago, the case of Poland's contribution to increasing productivity of coal fields through automation and mechanization was well known, and Poland led the world. It wasn't only in coal mining though, where Poland still ranks number four in the world, but also in the development of copper and natural sulfur reserves, among the largest in Europe. Poland's contribution to the automation and mechanization of underground mining has put it high on the list of countries with the expertise necessary to build sustainable human colonies on the Moon and Mars by early in the next century.

No matter how rapidly, or universally, the necessary transition to generation of electricity by nuclear fission, or fusion, is made, for the next generation the world is still going to need all the coal it can get, even if reduction technologies are advanced in efficiency and cleanliness. Therefore, the world is also going to need the expertise and excellence that Poland has developed in this area, and has applied in France and Germany, India and Indonesia, as well as within the Comecon.

Culturally, Poland is part of the West's Judeo-Christian tradition of fostering and protecting the individual's capacity, in the image of the Creator, to develop the creative powers which contribute to the development of the species as a whole. In confronting the difficult crisis of the winter, it is the freeing of the nation's such creative capacities, for the benefit of all mankind, which ought to provide the inspiration and commitment, instead of the detraction of the worn-out clichés which otherwise rationalize our continued acceptance of communist tyranny and monetarist usury.

Winter priorities

Priorities for winter have to include supplies of food and fuel.

In the case of the former, Poland's per capita consumption at the end of the 1970s, when people at least were not going hungry as they are now, was about 0.8 metric tons per year. Assuming, as a maximum, that over the coming 13 weeks, one-half of the food supply of the urban population has to be met, then Poland will require roughly 2.4 million tons. This breaks down into daily and hourly food flows into the transport grid of the country of 6,800 metric tons per day, or 280 tons per hour. It amounts to about five freight trains filled with food per day.

The assumption here is that Poland is about 25% short of

necessary food supplies, although the actual situation may well be worse. U.S. "experts" claim that there is no food shortage in Poland, simply hoarding by peasants, or insufficient money in circulation. After nearly 10 years of aggravated looting for hard currency earnings, this is a brutal absurdity. Politically, it serves to split peasants from city-dwellers. "Reform" in Poland, as in the Soviet Union, has made food disappear from the stores. It is distributed through place of employment, obtained by management under barter agreements with other suppliers. So the black market replaces regular distribution, "price reform" proceeds, and those who don't have access to supplies—like pensioners, unemployed widows, employees of non-prioritized enterprises—go hungry.

There are said to be efforts under way, by the Western Europeans, to provide emergency shipments of grains—wheat and barley—through the Baltic ports, and meats brought overland by refrigerated truck. The amounts are not adequate.

Together with food, a guaranteed fuel and power supply ought to be at the top of the list. Shortages in fuel supply could deliver the death blow to Poland. Coal production is estimated to be down at least 10% over last year. Imports of oil and gas from the Soviet Union are reported to have been curtailed by the same amount. As with the case of food, these estimates are probably low.

Fuel supply will probably dramatically worsen after Jan. 1, when the impact of newly approved Soviet export guidelines is felt. The estimates are based on the assessments of travelers from Poland. Where fuel is concerned, temperature becomes a consideration. Estimates are that if the temperature does not fall below −15°F for a sustained period, then stocks at electricity-generating stations, existing before winter set in and estimated at one month's supply, against the three of normal practice, ought to be sufficient. However, more devastating, coal production is thought to be down this year by about 10% from the 150-160 million tons produced in 1988. This in turn is reduced from about 200 million tons per year in 1979.

The effects have been and will be felt on electrical-generating capacity, which accounts for about half of Poland's total energy consumption, and everywhere else. Another approximately 25% of the total is consumed by industry as a whole, of which more than 60% is accounted for by the combination of the iron and steel industry, the chemical and petrochemical industry, and non-metal minerals processing. Households account for rather more than 20% of the consumption.

Equally devastating is the reported shortfall in Soviet-supplied oil and gas, which, along with other raw material inputs for the economy, have been sharply curtailed because of the worsening economic breakdown of the Soviet Union itself. Where supply of oil, gas, and refined petroleum products is concerned, this is thought to entail, at least, a 10% reduction from the levels of the year before, and perhaps more.

Oil and natural gas are reported to account for 33% of Poland's primary fuel requirements, in oil equivalent tons. The combined shortfall of coal, oil, and gas, can therefore be put in the range of 15-30% of the country's needs—the lower figure relative to recent years, the higher relative to the coal production peak of 1979. This will minimally affect more than 20% of electricity generation capacity and in the range of 7-10% of industrial capacity, more in the more energy-intensive branches like the iron and steel industry and chemical processing, where, on these estimates, the shortfall would be twice as much.

Beyond the matter of fuel supply, Poland's electricity-generating capacity has been at the breaking point since the late 1970s, when rationing was introduced. Generating plants will need spare parts, and maintenance work.

Poland's energy expansion plans in the 1970s depended on the development of the Lublin coal basin, which was to have provided the margin to take coal production from the 200 million ton level reached in 1980 up to 290 million tons by 1990. It didn't happen. Existing electrical-generating plant, made up of about 57 general-use installations and 230 specific application operations for industry, combined with 2 large generating plants that were scheduled to come on line in the 1980s, accounted for available coal from the Upper Silesian fields. Expansion in the 1980s, instead, where it did occur, was to be by way of adding brown coal-burning capacity.

In addition to parts and maintenance for existing plants, what is required to put non-completed plants into operation and open up the Lublin coal fields, should be figured in. Priority consideration might also be given to the German-engineered retrofit of brown coal plants to improve the efficiency of coal combustion. However, since the retrofit is reported to take 18 months, and the plant being upgraded is out of service for that time, it would be better to move directly ahead with the elaboration of a nuclear-sourced electricity-generating program for Poland. Priority should also be allotted to restoring Poland's research work in MHD.

In the industrial-processing sector, beyond the iron and steel industries, chemical- and petrochemical-processing account for about 20% of the electricity consumed by Poland's industries and 40% of the natural gas. The oil and gas shortfall, over the year, assuming a minimum 10% reduction (which should be more precisely estimated) is in the range of 2.5-3 million tons, with gas counted in oil equivalent tons. Oil accounts for two-thirds of the whole, 1.65 to 2 million metric tons.

Household use of coal as a fuel, said to range from 0.6 to 0.8 tons per person per year between 1979 and 1987, accounts for about 20% of the coal produced in the country. If half of the fuel is burnt during the winter months, then the overall requirement of households for the coming 13 weeks ought to be in the range of 15 million tons, with an estimated foreseeable shortfall in the order of 1.5 million to 2 million tons.

Poland exports about 40 million tons of coal per year for the hard currency earnings; 12 million tons of the exported coal is provided to Russians living in the western extremities of Soviet territory, not because the Russians need the imports, but because the nearness of Poland's mines to Russian consumers makes deliveries much easier.

The combined effects of shortfalls in coal, oil, and gas will also affect the transportation system directly and indirectly, reducing freight- and passenger-carrying capacity by around 10%.

Increased coal production can be generated internally. But the transport system must be capable of moving the increase. The oil and gas requirement cannot be produced domestically; nor can the Soviet Union, itself sliding into economic chaos and political turmoil, be counted on to supply what is needed. Therefore, other sources for the oil and gas are needed, whether from Norway's North Sea fields, or from Middle Eastern producers.

Similar considerations apply to Poland's other bulk imports of industrial materials, starting with the largest, iron ore. In this case, imports have been cut by half since the late 1970s, and another 10% reduction is taking place because of Soviet supply cut-backs. Here the range would be, on an annual basis, 10 to 20 million tons, with 20 million the figure reached in the late 1970s. If the winter months account for one-fourth of the annual consumption, then Poland would require 2.5-5 million tons of the ore over the winter months. Vital would be to find other suppliers, from African and Ibero-American nations desperate for expanded and dependable export markets, to free Poland from its dependency on Russian primary materials.

In recent years, Poland's railways have carried around 400 million tons of freight annually; out of this, approximately 40 million tons are exported and 40 million imported. Thus the system is called on to handle the throughput of approximately 10 million tons every quarter, with no account made for seasonal variations. The food, fuel, and iron ore requirements sketched out here would amount to an extra 5.4-6.9 million tons of freight carried over the winter months. Thus, if the emergency action is designed to produce a doubling of the throughput, with a safety margin added on, it would be in the right general direction. This would translate into the developed ability to handle, on a daily basis, in excess of 160,000 tons of incoming freight, or 6,000-7,000 tons per hour.

Spare parts and supplies

All areas of industrial processing are affected. Relative to other European nations, Poland is well endowed with raw materials, with the exception of iron ore, bauxite, oil, and gas. The country's extensive copper deposits, located in Lower Silesia near Legnica and Glogaw, are among the largest in Europe. Lead reserves are number two in the world; zinc reserves are number five, and are located on the northern edge of the Upper Silesian coal field. Sulfur and rock salt materials for the chemical industry are also among the most extensive in the world, and are found, respectively, at the confluence of the Vistula and San rivers southwest of Lublin, and between the Vistula and the Notec rivers, between Bydgoszcz and Lodz.

For the mining sector as a whole, ambitious development plans had been adopted in the 1970s, including planned development of downstream processing. Poland became a significant producer of electrolytic copper, and of sulfuric acid, and also of equipment for making sulfuric acid. The earlier development plans ought to be dusted off and recapitalized, after the years of looting.

In industrial processing, Poland used to be the second largest steel producer in the Comecon, and the eighth largest in the world, producing more than 12 million tons per year. The steel industry typifies the overall problem. Of the 27 plants which existed in the early 1980s, only two had been built since the end of the Second World War. The most modern was the Katowice Iron and Steel Plant, opened in 1976, with an initial capacity of 4.5 million tons. The Lenin Iron and Steel Plant at Nova Huta opened in 1954 with a capacity of 6 million tons. Obsolete open hearth technology makes up the bulk of the capacity, with just over 12% of the steel produced by basic oxygen converter, and another 14% by electric arc furnace. Poland had designed a two-phase plan for steel: 1) production of low-quality product for export, followed by 2) the addition of high-quality specialty steels. In the second phase, the Katowice plant was to have been expanded to 9 million tons capacity. It never happened. One specialty steel plant was completed in Warsaw, of the planned additions to capacity in Phase II.

The chemical industry, located near the sulfur deposits in Upper Silesia, and at Plock, a junction with the Soviet gas pipeline halfway between Warsaw and Bydgoszcz, and, for fertilizers, at Szczecin, is also reported to have been among the best in the Comecon. It concentrated on basic industrial chemicals, like sulfuric acid, nitric acid, sodium hydroxide, calcined soda, carbon disulfide, and fertilizers, which could be produced from local materials, and on raw materials for synthetic fiber production. The industry, like so much else, was capitalized by the West in the 1970s, and then cannibalized as part of the drive to reduce imports in the 1980s, reducing output below the levels achieved by the late 1970s.

It is the same with the textile industry and textile machinery manufacture, centered on Lodz and Woclawek; with shoe and leather manufacture, which has also suffered from the decline of agriculture; with the consumer electronics industry set up under license from Grundig in the Federal Republic in the 1970s; and with the Warsaw auto production facilities set up by Italy's Fiat. With the older industry like textiles, some of the capital equipment predates World War II; these industries were recapitalized in the 1970s, and then destroyed, handed over to final looting by Western finance, after the

Soviets had extracted what they could. Food processing and storage, including construction of refrigerated warehouses, would also be a priority under this heading.

Each could be gotten to function again. It is proposed that the machining for the parts required, and thus the parts, be supplied from the machining and precision industry center in the southern part of the G.D.R. Capital goods capabilities of the Federal Republic could be employed to jump-start the East German capital goods and machining capabilities, by fulfilling orders for Poland, as G.D.R. capabilities could help jump-start Polish capacity.

Spring planting

Provision for spring planting will increase the demands on the rail system significantly beyond the requirements sketched above. Roughly 5,000-6,000 further trains will be required to move machinery, implements, fertilizers, quality animal feed, and perhaps also seed, which will have to be brought in.

The rough magnitudes are as follows. For machinery, Solidarnosc has stated that Poland will require some 16,000 tractors. At 20 tractors per train, this would come to another 800 trainloads. Animal feed production capacity, manufact
50% since the end of the 1970s. Herd sizes have been reduced too, because of the pressure for foreign exchange earnings. The import requirement here may be 1-1.5 million tons. Similarly for fertilizer, incoming shipments of especially potassium-based fertilizers have been slashed in recent years. Here the volume required may reach 3-4 million tons. It is also necessary to ensure that there be sufficient seed available to maximize return by harvest-time.

General considerations

To ensure that the spring planting functions, as the final phase of overcoming whatever emergency this winter might bring, is also to commit to the ultimate development and recovery of Poland, as part of a broader effort aimed at the recuperation of the G.D.R., Czechoslovakia, and Hungary. The broader considerations of accomplishing that objective, adding another 100 million producers and consumers to the 300 million and more who comprise the "Inner European Market," ought to govern the approach taken to help Poland successfully out of the winter crisis.

The rough rule of thumb is that Poland would be to the G.D.R. as the G.D.R. would be to the Federal Republic. In energy throughput per unit population density, the product of energy per capita and energy per inhabited and cultivated hectare, density of throughput in the F.R.G. is roughly three times that of the G.D.R. and Czechoslovakia, and 15 times that of Poland. In terms of capital intensity of employment, the labor cost of agricultural production in the F.R.G. is one-third to one-half the cost of the same activity in the G.D.R. and Czechoslovakia, one-sixth the cost of production in Poland. In manufacturing employment, the same pattern prevails, the worker in the Federal Republic being six to eight times more productive in production, per capita of the total population, of selected consumer items, food, clothing, appliances, automobiles, than the worker in Poland, and four to six times more productive than the worker in the G.D.R. and Czechoslovakia.

Such considerations make a mockery of the idiocy put forward in the West by the monetarists, and their hired thugs like Harvard's Jeffrey Sachs. These argue that the advantage of investing in the East is cheapness. They mean the relative cheapness of labor, in terms of wage expenditures. Economically they are illiterates. What is crucial is what they overlook. Poland, the G.D.R., Czechoslovakia, and Hungary are culturally part of the West. Their populations are culturally capable of assimilating scientific and technological progress in the way that Western culture, based on the idea of the sanctity of each individual, makes possible. Providin
improvements to develop basic infrastructure, transportation, water management, communications, and upgrading the technology content of capital goods stocks, while promoting and protecting those cultural values which, for the West, define Man as uniquely different from the lower beasts—such policies would mean rates of growth such that in the
medium term of 5-10 years, the expanded European market, integrating the eastern frontier lands of Western culture, will easily be the most powerful on the face of the Earth.