

# HEATING SYSTEM STEAMS MUSCOVITES

■ Residents must endure temperatures at work and at home that can be way too cold or too hot.

By Richard C. Paddock  
LOS ANGELES TIMES

MOSCOW — Like giant white serpents, two huge pipes emerge from the ground and wind their way 500 yards down Raskovol Lane, taking over the sidewalk, arching high above side streets and gliding past balconies and windows.

This monstrosity is hated by its neighbors, but it is an essential element of Russian life: The pipes are the tip of a vast subterranean network that delivers heavily subsidized heat to every home in Moscow for just a few dollars a month.

They also are a monument to waste, inefficiency and centralization that illustrates how far the new Russia must travel to build a market-based economy. At a time when government agencies cannot even pay wages and pensions, the Moscow heating system annually consumes as much natural gas as all of France, officials say.

"All our salaries and pensions are burning up in the stoves of municipal heating stations," complained first Deputy Premier Boris Y. Nemtsov shortly before his recent appointment by President Bo-

ris N. Yeltsin.

In Russia, central heating means something different than in the West. Here, homes, stores and offices do not have their own furnaces. Instead, Moscow's 10 million people are warmed by immense government heating plants that pump steam to radiators in every apartment, workplace and school. Individual thermostats are virtually nonexistent. The government turns on the heat at the end of October and keeps it on until early May.

The level of indoor heat is set for all of Moscow by a few anonymous administrators.

Based on outdoor temperatures and weather forecasts, the agency that operates the system frequently adjusts the temperature of the steam from a low of 230 degrees to a high of 300 degrees Fahrenheit.

But it can take as long as 12 hours for an increase or decrease to travel through the pipeline network and reach homes and offices. And of course, when the forecast is wrong, the entire city can be too cold or too hot.

The heat also has trouble reaching buildings when the city's aging pipes are corroded or leak, leaving some residents without heat for weeks or months at a time.

So some residents can be shivering while others swelter. When Muscovites get too hot, they simply open their windows to let the

heat escape even in midwinter, giving little thought to the idea of energy conservation.

"At the beginning of winter, they wait to turn up the heat very late and you freeze," said Julia Biryukova, 20, whose balcony overlooks the exposed plumbing on Raskovol Lane. "Then sometimes they turn up the heat so high you feel like you're in a sauna."

With indoor temperature swings of more than 20 degrees Fahrenheit, many residents would like to have the ability to control the heat themselves. But they acknowledge that few Russians would be willing to pay the enormous cost of conversion.

Besides heat, the system produces some of Moscow's electricity and all of the city's hot water. Adding to residents' inconvenience, the hot water is shut off for at least a month every summer for maintenance.

Some of Moscow's new buildings are being constructed along Western designs — with their own furnaces, thermostats and water heaters. But retrofitting the entire city to give people control over their comfort would cost billions of dollars.

When the system was first built in the Stalinist era of the 1930s, it was a great socialist improvement that eliminated the burning of coal and gave many residents reliable heating for the first time.

During the Soviet era, prices were kept artificially low, and heat cost only a few cents a month.

"On an individual basis, it did not make sense for a person to pay attention to conservation because we were paying almost nothing," acknowledged Anatoly A. Zhuravov, general director of the Moscow city heating agency, Mostteploenergo. "It was wrong."

Today, there are 172 heating plants serving Moscow — an average of one giant furnace for every 58,000 people.

In recent years, prices have gradually risen, but they still come nowhere close to their true cost: A bill for heating an average Moscow apartment is only \$7 a month.

The dilemma for administrators now is how to build market principles and inject economic incentives for conservation into this centralized system. Raising prices to reflect the cost of providing energy would be politically impossible when many people earn as little as \$100 a month. And even if the government wanted to charge people according to their consumption, it would be very difficult: The system was built without meters to measure use.

"It is impossible to change the system overnight," said Zhuravov. "When the system was built, the idea was to economize. No meters or thermostats were built to regulate temperature."

# The best organization is no organization

By Alan Webber

**T**he old, official organization chart — every company has one, right? And they're all pretty much the same: shined like a pyramid. The CEO is up at the top, with everybody else in layers down below, a hierarchy of boxes with lines showing who works in which department and who reports to whom.

It's a legacy that dates back nearly a century, with roots that trace to the military. But as strongly fixed as the pyramid is in business, a few organizations are starting to chuck the old organization chart. If you want your company to be innovative, a rigid organization chart that dictates all the lines of communication is a corporate straitjacket. If you want your company to be global, you have to be willing to experiment with an organization chart that looks like a spider's web. And if you want your company to be fast and agile, then you might want to try no organization chart at all.

That's what the top people at Olicon are committed to. They simply did away with the pyramid altogether. Based in Denmark, the \$160 million company is the fastest-growing hearing aid producer in the world, an innovator that came up with the world's first digital hearing aid and a company with no

organization chart. Olicon's CEO, Lars Kolland, blew it up. He unilaterally abolished the old pyramid. Today there is no formal organization, no departments, no functions, no paper, no permanent desks. All 150 employees have workstations that are mobile, all the desks are on wheels, and everybody works on projects. And the projects are always subject to reorganization. "To keep a company alive," says CEO Kolland, "one of the jobs of top management is to keep it disorganized."

Sun Microsystems is a little more subtle about it, but the organization chart there looks more like a pyramid.

The \$6 billion company in Mountain View, Calif., has 15,000 people who generate up to 2 million e-mail messages each day, a clue to the real way work gets done. John Gage, the company's chief scientist, keeps a keen technological eye on the network of communication. "Your e-mail flow determines whether you're really part of the organization," Gage says. The people who get the most messages and who participate in the most important exchanges are the people with the most power, regardless of what the official chart may say.

And there never was a pyramid at VISA, set up nearly 25 years ago by Dee Hock to be a company without any of the ordinary rules of organizations. "The better the organization is, the less obvious it is," Hock says. "In VISA we tried to set up an invisible organization and keep it that way."

VISA is the posterboy of the latest mantra in business: The best organization is no organization. The way Hock designed VISA, it's almost a biological entity. Like the human brain, it works without a rigid or

organization chart or hierarchy. Unlike the old pyramid organization, VISA is a confederation of members that virtually organizes itself. Its organization is so hard to find, it's almost impossible for anyone to answer questions that are easy when you're talking about ordinary businesses. Who runs it, who owns it, who makes the decisions, where's the headquarters? It's an unusual way to organize a business, but, says Hock, "inherent in VISA is the archetype of the organization of the 21st century." Now Hock's mix of chaos and order is finding new converts. A group of fishermen and environmentalists in New England, an association of community colleges, and the

National 4-H Council are all looking into changing their organizations to be, well, disorganized.

Are we witnessing the end of the organization chart? When you visit most companies today, if you ask to see their organization chart, you'll still be handed something that looks a lot like the old-style pyramid. But underneath that official-looking chart, if you talk to the people who really know how the work gets done, you'll probably find something that looks a whole lot more like Olicon, Sun Microsystems or VISA. The reasons are simple and easy to understand.

There's just too much change happening far too fast for any one person to keep track of. An organization chart that shows the CEO holding all the reins of power is a hopeless delusion. At the same time, John Gage's point about Sun Microsystems' e-mail reflects the most urgent need inside business today: smart people in all parts of any company need to be able to interact and exchange ideas. Whether you use e-mail or

movable

desks, the goal is the same: an open environment that encourages people to innovate. Little by little, the old organization is changing, and a new, loosely knit, constantly changing "unorganization" is beginning to emerge. Watch out for falling pyramids.

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## THE FORUM

## Government's an easy target — deservedly or not

By Alan Ehrenhalt

Five days a week, in the morning and at night, I ride the same subway line back and forth to work. Once a month or so, something goes really wrong — a train malfunctions or someone wanders onto the tracks — and the whole system slows down.

When that happens, I can't help listening to the passengers standing next to me, muttering disgustedly to each other and to themselves: "Lousy Metro. Can't get a blessed thing right. Every time I come down here the same thing happens."

They're wrong, of course. I know that, because I'm there all the time. The system doesn't break down every day — nothing close to that. Statistically, there's no way you could encounter a problem on every trip unless you knew in advance when the problems were going to occur.

But after a decade or so of listening to these tantrums, I've reluctantly concluded that the people who throw them are, at some level, enjoying the experience. It makes them feel better. They believe the purchase of a Metro farecard for \$1.25 also carries with it the privilege of having a hussy fit on the platform when a train is 10 minutes late.

Incidents like this are the

dirty little secret of government performance. Yes, we pay lip service to Vice President Al Gore's crusade to make government more efficient and customer-friendly. We tell pollsters that having the trains run on time is very important to us. But we also cherish our right to complain even when they're always do.

All my adult life I have known that I am supposed to ridicule the U.S. Postal Service, to denounce its employees as a bunch of hopeless incompetents. Based on personal experience, it's not easy to justify that attitude. In the past 30 years, I have mailed thousands of letters. The post office has lost one of them — a Master-Card bill 10 years ago. I had to call the bank to cancel the finance charge. But other than that one envelope, everything I have dropped in a mailbox appears to have arrived safely at its destination.

Admittedly, I don't check to see how long it takes to get there. Maybe it takes a day or two longer than it did a generation ago. On the other hand, most

about the Postal Service without making fun of its inefficiency. Even the management does it.

A few years ago, when Marvin Runyon took over as Postal Service director, he called the condition of U.S. mail delivery a disgrace and vowed to fix the system from top to bottom. I suppose that's the politically smart thing to say when you take on any big management

problem. There are a few government agencies, I admit, whose reputation for hostility to the customer has some obvious basis in fact. The Internal Revenue Service is one of them. The average state Department of Motor Vehicles is another. Even here, though, the chorus of public criticism misses the essential point.

The state DMV isn't there to bolster my self-esteem as a motorist. It's there to protect me, the safe driver, from the guy next to me who has no business on the road. It's fine to have the clerk smile and call me "sir" when I come in to renew my license. But what's really important to me is for them to enforce the letter of the law on everybody else.

The same with taxes. If I pay mine as required, I want the IRS to be unfailingly vigilant on anyone who tries to cheat. If they can do it politely, as they now seem determined to do, all my happiness is in the fact that I am happy in business. There is a limit to how popular they will ever be, or should wish to be.

My guess is that when the current IRS "customer friendliness" movement has had its full chance to sink in, the percentage of taxpayers who curse the agency for being inefficient and unresponsive will be remarkably close to what it is

now. The service may be better, but the complaints will be the same.

It's true that the level of public confidence in government at all levels was once much higher than it is now. In the early 1960s, 75% of the people said they could trust the federal government to do the right thing most of the time. In this decade, the figure has been closer to 25%.

And granted, there are some agencies that performed more efficiently 30 years ago than they do now. Maybe post offices, public transportation systems and tax collection agencies were among them. But the more important point is that in those days, confidence in virtually all the institutions of society was much higher than it is now. Government just happens to be the one whose ridicule is an American national pastime.

Having pondered these issues, I smile benignly at the angry commuters on the subway platform, smug in the satisfaction that I take a broader, more magnanimous view of life than they do. But I don't correct them on their misperceptions. I don't want to get thrown in the path of an oncoming train.

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