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### Home Loan Program Designed to Combat Sprawl Could Lead to Higher Default Rate


A new mortgage program designed to combat urban sprawl may actually lead to higher rates of default on home loans, according to a recent analysis by researchers at Resources for the Future. The program, known as the “location-efficient mortgage,” promotes home buying close to cities or mass transit by relaxing downpayment requirements for buyers in these areas. Location-efficient mortgages, a component of the Clinton administration’s Livable Cities Initiative, are being pilot-tested in Chicago, San Francisco, and other cities through a \$100 million initiative spearheaded by Fannie Mae and others.

According to advocates of the program, people who live in densely populated or transit-rich areas incur lower transportation costs, mainly because they own fewer cars and drive their cars less. As a result, the argument goes, they have more disposable income and their downpayment requirements can be relaxed without increasing the risk that they will default.

According to the RFF study, however, the transportation “savings” people may enjoy in these neighborhoods do not translate into lower default risk. RFF Fellow Allen Blackman and Senior Fellow Alan Krupnick examined the incidence of default for 8,000 loans made by the Federal Housing Administration in greater Chicago between 1988 and 1992. They concluded that people in the areas targeted by the loan program are every bit as likely to default as those in other areas, all other factors being equal. This conclusion holds for a number of different measures of location efficiency, including greater housing density, better access to mass transit, more

pedestrian “friendliness,” and an index of these attributes used by loan providers. The findings do not mean that there are no transportation savings in these areas, the authors say; rather, they simply show that the savings are not sufficiently large to affect the probability of default.

The implication of these findings is that extending higher levels of credit to borrowers in these areas through a large-scale, location-efficient mortgage plan may actually raise default rates, causing increased losses for mortgage institutions. These institutions may need to subsidize these loan programs or modify them to reduce default risk by, for example, requiring borrowers to undergo financial counseling, an idea currently under discussion. The added costs of subsidies would have to be balanced against any benefits the program might bring, such as controlling sprawl.

RFF’s research was funded under a cooperative agreement with the U.S. Environmental Protection Agency. The paper, *Location Efficiency and Mortgage Default*, can be downloaded at [www.rff.org/disc\\_papers/PDF\\_files/9949rev.pdf](http://www.rff.org/disc_papers/PDF_files/9949rev.pdf). 

### Reducing the Service Sector’s Environmental Toll May Take New Incentives for Businesses

The service sector, which now accounts for three-quarters of the nation’s employment and Gross Domestic Product, has a major influence on environmental quality in the United States, according to a new RFF study led by Terry Davies, director of the Center for Risk Management. As the nation continues to evolve into a post-industrial economy, businesses and regulators should explore ways to improve the environmental practices of firms in the service sector, which can influence the behavior of their

suppliers “upstream” and consumers “downstream.” The three-part study paints the most complete picture yet of how the health care, foodservice, and tourism industries affect the environment.

Minimizing the environmental impacts of the service sector will require a different regulatory approach from that applied to manufacturing, mining, or agriculture, the study shows. Rather than cranking out new regulations, federal and local officials should instead focus on devising incentives for service businesses to adopt environment-friendly behaviors, ranging from reducing energy use in fast-food chains to educating tourists about protecting sensitive habitats, the reports say. For example:

Health care leaders and government regulators should continue to encourage the use of substitute materials for mercury, for example in dental fillings. At the same time, they should accelerate the transition away from on-site assembly of all medical products using both mercury and radioactive materials in favor of central, off-site locations, where the waste that is generated can be better handled.

The health care industry should also be encouraged to find ways to reduce the current stream of solid medical waste, which has grown in recent years as hospitals have sought to reduce the risk of hospital-acquired infections.

The foodservice and food retail industries should attempt to leverage the behavior of suppliers and consumers by encouraging producers, wholesalers and distributors to reduce packaging, use recycled materials, and reduce pesticide use. Firms also can offer more environment-friendly choices to consumers, thus helping raise consumer awareness.

Businesses and regulators are most likely to reduce the harmful environmen-



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tal effects of tourism by launching educational efforts that are tailored for specific audiences and designed to complement existing regulations. For example, officials could combine a prohibition against anchoring a sightseeing boat in a sensitive marine ecosystem with an explanation of the potential damage a boat can do to that ecosystem.

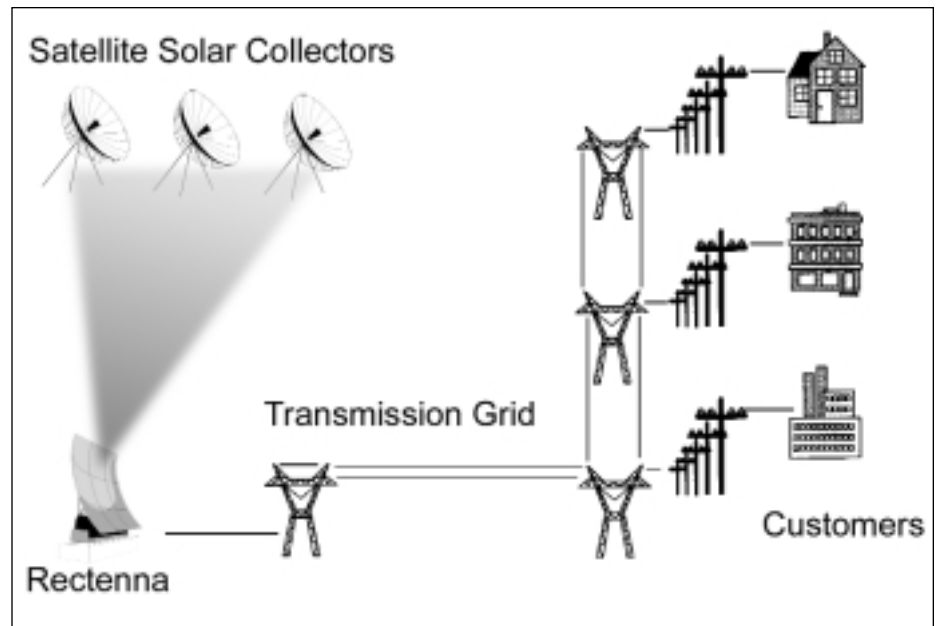
Hotels can offer guests the choice of having their linens cleaned less frequently, and use this as an opportunity to explain the environmental benefits of such a program. Educational approaches also could be targeted at the industry by emphasizing the cost savings and marketing benefits of “green” tourism, the report says.

All three reports—*Environmental Implications of the Tourism Industry*, *Environmental Implications of the Health Care Service Sector*, and *Environmental Implications of the Foodservice and Food Retail Industries*—can be downloaded at [http://www.rff.org/disc\\_papers/2000.htm](http://www.rff.org/disc_papers/2000.htm). The study was funded by the U.S. Environmental Protection Agency.

### Plan to Harness Solar Power with Satellites Faces Technical Difficulties

For more than 30 years scientists have wrestled with an intriguing possibility—could orbiting satellites be used to harness solar energy for generating electricity on earth? Advocates have speculated that satellite solar power (SSP) could someday take its place among other renewable energy sources as an alternative to fossil fuels.

A new RFF report concludes that this technology is not likely to become a viable energy source in the next 20 years. The RFF study, led by Senior Fellow Molly Macauley, projects that future demand for



satellite solar energy is unlikely to be enough to justify the considerable costs involved in developing it. By 2020, when many experts believe SSP could be technically feasible, conventional electricity generation is likely to be sufficient in terms of cost, supply, and mitigated environmental impacts.

Under the scenario envisioned by SSP proponents, satellites would be launched to gather solar energy and send the energy back to earth, where a receiving antenna on the ground would convert it to a form usable by electric utility grids. The National Aeronautics and Space Administration (NASA) actively pursued this idea for nearly a decade before it halted this work in the early 1980s because of its likely high costs and technical difficulty. The agency recently resurrected the idea, however, after independent reports and a 1997 NASA-sponsored study reached a more favorable conclusion about the potential of satellite solar power to become part of the world's energy portfolio.

Because the technology needed to develop SSP is still in its early stages, it is difficult to assess how much it will ultimately cost to develop, and thus how competitive it may be compared to other forms of energy, the RFF study says. For SSP to be competitive, significant reductions would be needed in the costs of launching the satellites into space and other key technologies.

Additionally, demand for SSP may be low among foreign countries unless they share in control of the system. At the same time, some in the public continue to worry about the possible health effects of electric and magnetic fields, a fact that may further weaken SSP's public support.

The report encourages the federal government to continue developing new technologies that would lower the costs of SSP—particularly focusing on technologies that may be transferable to other projects. Over the course of its study, RFF's economic researchers communicated frequently with NASA's technical engineers.




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If plans to develop SSP move forward, such collaborations between technical design researchers and those conducting economic and market analyses should continue, the report says, and the energy industry should be invited to participate in these discussions as well.

Given the large uncertainty about demand and costs, it would be premature for the government to make more serious financial commitments to satellite power, such as by guaranteeing loans or providing tax incentives or other financial assistance to private companies to develop it, the report says.


While its economic viability for generating power on earth may be limited, satellite space power may prove useful for powering systems based in space, the International Space Station, other large orbiting platforms, lunar bases, or other activities to explore and develop space. RFF will release a follow-up report this summer that assesses the costs and benefits of these other nonterrestrial applications.

The study, *Can Power from Space Compete: The Future of Electricity Markets and the Competitive Challenge to Satellite Solar Power*, was funded by NASA. It appears on the RFF Web site at <http://www.rff.org>. 

### Tracking the Cost of Complying with Environmental Regulations

For more than 20 years, the U.S. Census Bureau tracked the cost of complying with environmental regulations through its Pollution Abatement Costs and Expenditures (PACE) survey. Begun in 1972, the PACE survey was suspended in 1995 for budget reasons, but the Census Bureau is planning to reinstate it again this spring.

At the request of the U.S. Environmental Protection Agency (EPA)—a partial

funder of the PACE survey—RFF held a workshop in March to explore ways that the survey can be improved. The reappraisal comes at a critical time. Since the survey was first designed in the early 1970s, firms have embarked on increasingly ambitious ways of complying with regulations, the costs of which are typically hard to measure. Workshop participants, who included government officials, academics, and business representatives, discussed a host of issues reflective of this more expansive view toward pollution prevention. Some of the questions that were addressed concerned: which types of abatement actions should be measured, which sectors of the economy should participate in the survey, and whether investments in energy efficiency or other greenhouse gas mitigation should be tracked. Survey design factors—such as how to value abatement costs associated with changes in process or design, and how to improve the quality of the survey responses—were also considered. Insights gained at the workshop will be described in a report to EPA, due to be completed this summer. 


### Environmental Citizenship to Support Transboundary Pollution Reduction in the Danube

RFF recently began work on a pilot project to develop an institutional framework for providing public access to environmental information and developing public participation procedures in Hungary and Slovenia. RFF's partners in this effort are New York University (NYU) School of Law and the Regional Environmental Center for Central and Eastern Europe (REC). The project is designed to assist international efforts to reduce transboundary pollution from the discharge of nutrients and toxics

into the Danube River. It is funded by the Global Environment Facility (GEF), with funds administered by the United Nations Development Programme (UNDP).

RFF, NYU, and the REC will work with officials from the Environment Ministries of Hungary and Slovenia and nongovernmental environmental law organizations from both countries. Hungary and Slovenia are among the “fast-track” countries emerging from 50 years under the Soviet system.

Both countries have made strong, public commitments to developing open government provisions in their administration of environmental protection. However, they are still in the process of developing experience to support these changes. The pilot project will help build capacity in these two countries to establish the legal, institutional, social, and practical infrastructure for public access to environmental information and also for informed, meaningful public participation in protecting the Danube.

In addition to supporting the efforts of Hungarian and Slovenian environmental experts, the project will also demonstrate how open government measures can help other Danube countries to achieve region-wide commitments to improve deteriorating water quality and provide greater public access to environmental information in each of their countries. 



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### RFF Scholars Meet with Thai Researchers and Officials to Discuss Public's Role in Environmental Decisionmaking

Three RFF scholars—Ruth Greenspan Bell, Thomas Beierle, and Ramanan Laxminarayan—recently met with Thai researchers and officials to explore the evolving role for citizens in environmental decisionmaking. The setting was a workshop, held March 18–19, in Bangkok, Thailand. The workshop, entitled “Good Governance, Public Participation and the Decision-Making Process for Environmental Protection,” was attended by 150 Thai government officials, representatives from nongovernmental organizations and industry, and academics.

The motivation for the workshop was Thailand's 1997 constitution, which expanded the legal rights of citizens to become involved in government decision-

making. Many of Thailand's environmental procedures are being reexamined to incorporate greater public involvement. The Thai government has not yet decided how possible new practices will be institutionalized in government agencies. Workshop participants were particularly interested in the role of public hearings in the overall environmental impact assessment process, especially in light of ongoing controversy in Thailand over large-scale industrial and natural resource projects.

Bell, director of the RFF program on International Institutional Development and Environmental Assistance, outlined the U.S. perspective on public participation and explained the role of the courts and the public in environmental impact assessment under the United States' National Environmental Policy Act. Beierle and Laxminarayan described the “lessons learned” from case studies of public participation in controversial environmental

decisions in the United States, Canada, and India. In turn, the Thai researchers described public participation in Thailand from the point of view of the country's unique legal, political, and cultural context. At the conclusion of the workshop, RFF researchers and their Thai colleagues began formulating ideas for continued collaborative research.

The workshop was jointly sponsored by RFF and the Institute for Social and Economic Policy (ISEP), an independent research organization in Bangkok. RFF's partner in organizing the workshop was ISEP's Suthawan Sathirathai, who has worked previously with RFF researchers David Simpson and Roger Sedjo. Additional support for the workshops came from the United States-Asia Environmental Partnership, the Canadian International Development Agency, and the Thailand Research Fund. 



Workshop speakers included: Dr. Vanchai Vatanasapt, Khon Kaen University, Prof. Dr. Tongroj Onchan, Thailand Environment Institute, and RFF's Ruth Greenspan Bell and Ramanan Laxminarayan