

Developing and Financing a Geothermal Small Business

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Bob Lawrence & Associates, Inc.
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Supported by USDA Rural Development



Where is the money?

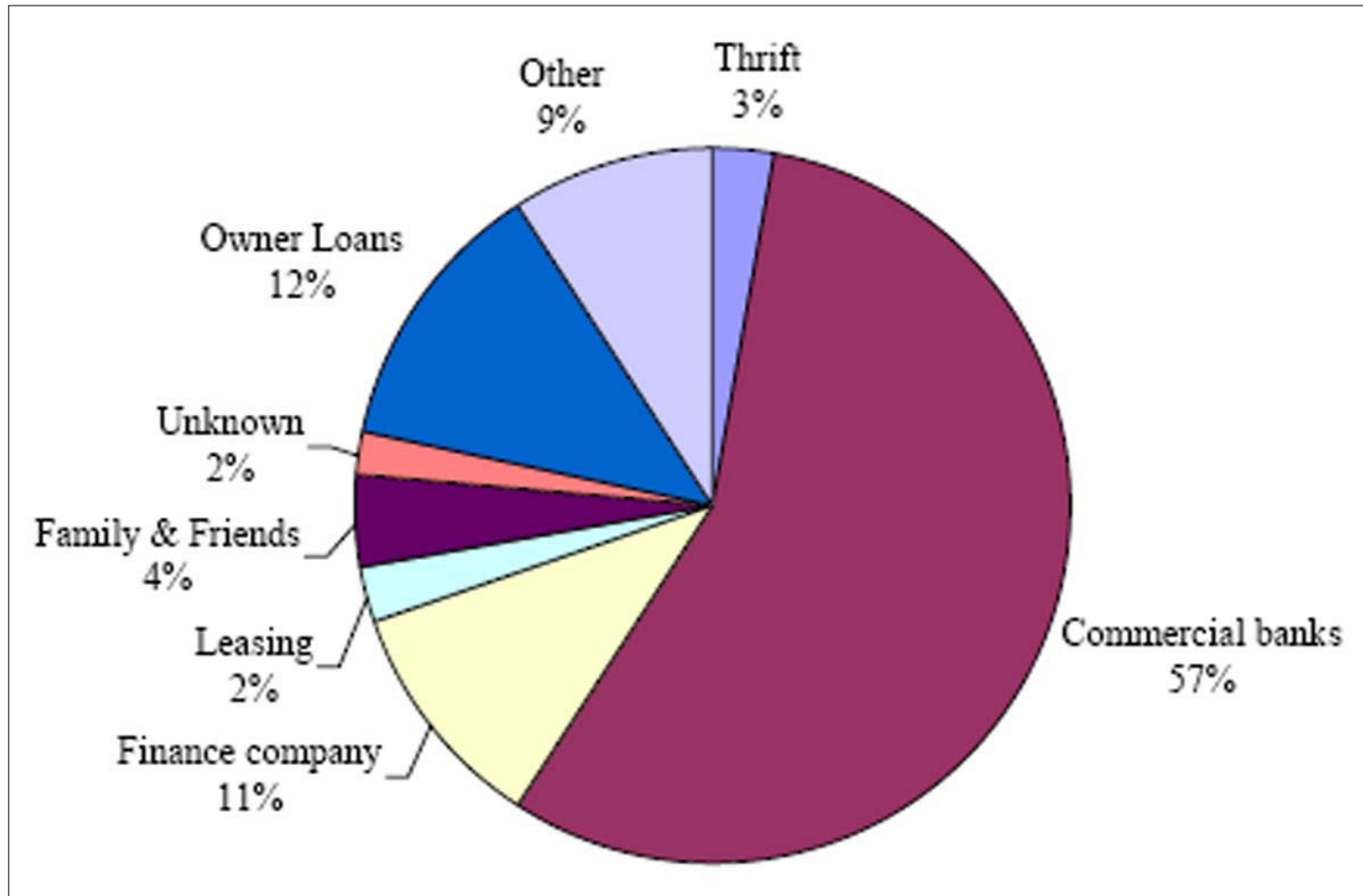


- Traditional forms of financing
- Small Business Administration
- Federal programs:
 - U.S. Department of Agriculture (USDA)
 - Renewable Energy Systems & Energy Efficiency Improvements Program
 - Value-Added Producer Grant Program
 - U.S. Department of Energy (DOE)
 - GeoPowering the West
 - Loan Guarantee Program

Traditional forms of financing

- Personal assets - savings, credit cards, home equity line.
- Friends and family - primary source of capital for most new businesses.
- Your friendly neighborhood bank or credit union – supply > 80% of credit line lending.
- June 2004 - small business loans outstanding owed to commercial banks = \$522 billion.

Small business debt, 1998



Small Business Administration

- Financing programs
- Technical assistance
- Guaranteed \$12.7 billion in loans in FY04.
- Applicant must be for-profit and qualify as a small business as defined by SBA.
- Farms and agricultural businesses are eligible but should first explore the Farm Service Agency programs.

SBA Financing Programs

- 7(a) Loan Guarantee.
- Pre-Qualification Loan.
- Low Documentation Loan.
- *SBAExpress*
- CAPLines.
- SBA 504 Loan Program. Check with your local bank to see which SBA programs they participate in.

U.S. Department of Agriculture

- Renewable Energy Systems & Energy Efficiency Improvements Program
- Authorized by 2002 Farm Bill Section 9006.
- From 2003 to 2005:
 - USDA Rural Development awarded > \$66 million in grants and \$10 million in loan guarantees to 434 projects in 38 states.
 - Leverages almost \$800 million in capital investments in rural communities.
- Provides grants and loans guarantees.
- Grants limited to 25% of total project costs.

USDA RE/EE Improvements Program I

- Latest awards announced 8/30/06.
- \$17.5 million to 375 recipients in 36 states.
- Eight geothermal projects
 - From \$3,000-\$50,000
 - Geothermal heating and cooling system.
 - Geothermal heating system for greenhouse.
 - Geothermal and solar electric micro-utility.
- Contact Brian Buch or Tim Wheeler at
USDA Rural Development.

USDA RE/EE Improvements Program III

- Template: “Fizer Dairy Geothermal Heating”
 - Developed with GPW support.
 - Hypothetical project seeks to decrease some of the Fizer Dairy’s high-energy costs by using the geothermal resource found on the farm located in southern Idaho near the town of Berger. Project is for the purchase of a renewable energy system and geothermal components necessary to supply hot water to dairy operations.
 - http://geothermal-biz.com/Docs/dairyproposal_final_2_20_06.pdf

USDA Value-Added Producer Grant Program

- Provides grants of up to \$300,000 for working capital for any value added agricultural activity including farm-based renewable energy projects.
- Open to independent producer, agricultural producer group, farmer or rancher cooperative, or majority-controlled producer-based business venture.
- Awarded \$4.7 million dollars for 41 grants in FY06.
- Contact Brian Buch or Tim Wheeler at USDA Rural Development.

USDA RE/EE

Improvements Program II

- USDA Rural Development Contacts:
 - Brian Buch, Rural Energy Coordinator, Blackfoot, Tel: (208) 785-5840 ext. 118, Brian.Buch@id.usda.gov
 - Tim Wheeler, Business Programs Specialist, Boise, Tel: (208) 378-5623, Timothy.Wheeler@id.usda.gov
 - <http://www.rurdev.usda.gov/id/>
 - <http://www.rurdev.usda.gov/rbs/farmbill/>

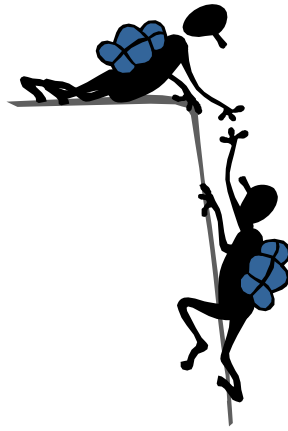
U.S. Department of Energy

- GeoPowering the West (GPW)
- Loan Guarantee Program

GeoPowering the West (GPW) I

- Funds technical assistance that:
 - Gets projects on-the-ground.
 - Promotes results in a period of high-energy costs.
 - Reduces energy use, saves costs, enhances productivity of industries, and maintains or creates jobs.
- Primarily feasibility studies.
- DOE GPW funded 17 technical assistance projects in FY06.

GPW II – Idaho projects



- A feasibility study for geothermal heat pump use by the Nez Perce tribal group.
- Feasibility Study of Using Geothermal Heat Pump Technology at Proposed Schitsu'umsh Cultural Center at Coeur d'Alene Tribe Headquarters.
- Feasibility study of expanding geothermal system at Ward's Greenhouse.

GPW III

- At states' request, DOE plans to continue technical assistance awards to projects contingent on receiving funding for FY07.
- Contact: Gerry Galinato, Energy Division, Idaho Department of Water Resources.

DOE Loan Guarantee Program

- Authorized by Title XVII of the Energy Policy Act of 2005.
- First solicitation issued by DOE 8/8/06.
- Initial round is \$2-billion.
- Eligible projects are those which avoid, reduce, or sequester air pollutants or anthropogenic emissions of greenhouse gases; and employ new or significantly improved technologies.
- Geothermal projects are not included.

DOE Loan Guarantee Program

- In September, a bipartisan group of 10 Senators sent a letter to DOE Secretary Bodman urging the agency to include geothermal energy in the Loan Guarantee Program.
- DOE has extended the due date for pre-applications under the loan guarantee program to 12/31/06.
- As of 10/31/06, geothermal had not been added to the solicitation.

Future funding options

- Section 9006 FY07
- DOE Loan Guarantee Program
 - Need to have geothermal added in accordance with the Energy Policy Act of 2005.
- DOE GPW
 - Plans more technical assistance and financing activities assuming funding.
 - Could use to develop a template for REAP and/or Loan Guarantee Program.
 - DOE Geothermal Program zeroed out in FY07.
- Rural Energy for America Act of 2006 (Farm Bill 2007)

Rural Energy for America Act of 2006 (S. 3890)

- Introduced 9/12/06 by Senator Harkin.
- Goal = to help the agricultural sector to provide at least 25% of the U.S.'s energy by 2025 (“25 x ‘25”).
- Would provide competitive grants to farmers, ranchers, and rural small businesses for market-ready renewable energy and energy efficiency projects.
- Renames Section 9006 the Rural Energy For America Program (REAP).

REAP I

- Would increase current Farm Bill clean energy funding from \$115 million over five years to \$250 million a year by 2012.
- Sets aside 20% for program funding for state and regional organizations to establish rebate programs for renewable energy projects.
- Adds rural school districts to the list of those eligible for funding.
- Ensures that projects that receive grants receive the full renewable energy production tax credit.

REAP II

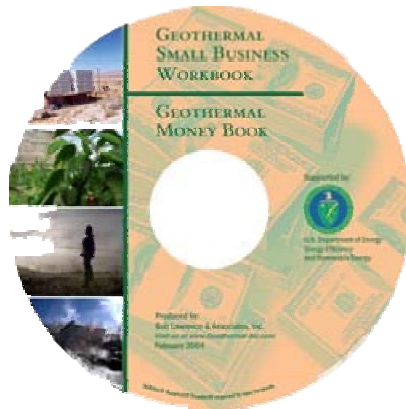
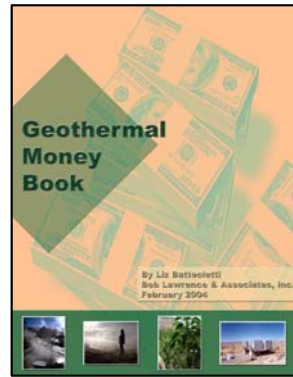
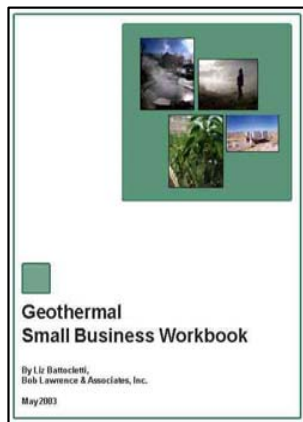
- Calls for the administration of direct loans from USDA.
- Feasibility and planning studies will be eligible activities to help plan sound projects and to help resource-rich areas of the country to benefit more from the program.
- Referred to Senate Committee on Agriculture, Nutrition, and Forestry.

Geothermal-biz.com

- Created in 2002 to help geothermal entrepreneurs develop geothermal direct use and small power generation projects.
- Supported by DOE GPW.



Geothermal small business workbooks



- Help people:
 - Understand geothermal applications,
 - Write a business and financing plan and financing proposal, and
 - Identify potential financing sources.
- Available in PDF format on Geothermal-biz.com website or on CD-ROM by request.

Geothermal Small Business

Workbook

- Provides background, market, and regulatory data for direct use and small-scale (< 1 MW) power generation geothermal projects;
- Refers geothermal entrepreneurs to several sources of useful information including owners of existing geothermal businesses, trade associations, and other organizations;
- Breaks down the complicated and sometimes tedious process of writing a business plan into five easy steps;
- Leads you step-by-step through the process needed to structure a business and financing plan for a small geothermal project; and
- Helps you develop a financing plan that can be adapted and taken to potential financing sources.

Geothermal Money Book

- Explains the specific criteria potential financing sources use to evaluate a proposal for debt financing;
- Describes the Small Business Administration's (SBA) programs to promote lending to small businesses;
- Lists specific small-business friendly lenders for small geothermal businesses, including those which participate in SBA programs;
- Identifies federal and state incentives which are relevant to direct use and small-scale (< 1 MW) power generation geothermal projects; and
- Provides an extensive state directory of financing sources and state financial incentives for the 19 states involved in GPW.

Other useful websites I

- Farm Bill Blog
 - <http://www.farmbill2007.com>
- Farm Bill Clean Energy
 - Environmental Law and Policy Center
 - Tracks legislation and clean energy programs of interest to the farming community.
 - <http://www.farmenergy.org/>
- USDA 2007 Farm Bill
 - http://www.usda.gov/wps/portal/usdafarmbill?navtype=SU&navid=FARM_BILL_FORUMS

Other useful websites II

- **Geo-Heat Center, Oregon Institute of Technology**
<http://geoheat.oit.edu/>
- **Geothermal Education Office**
<http://geothermal.marin.org>
- **Geothermal Energy Association**
<http://www.geo-energy.org/>
- **Geothermal Resources Council**
<http://www.geothermal.org/index.html>
- **DOE GeoPowering the West**
<http://www.eere.energy.gov/geothermal/gpw/>
- **DOE Geothermal Energy Program**
<http://www1.eere.energy.gov/geothermal/about.html>

Conclusion

- Geothermal heat and hot water have many commercial agricultural applications.
- A wide variety of tools exist to help farmers, ranchers, and rural landowners develop and finance their geothermal resources.
- Funding and technical assistance are available from DOE and USDA.

Thank you

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