ORMAT TECHNOLOGIES, INC.
Form 10-K
March 11, 2013
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UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

Form 10-K

þ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**
For the fiscal year ended December 31, 2012

Or

¨ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

Commission file number: 001-32347

ORMAT TECHNOLOGIES, INC.

(Exact name of registrant as specified in its charter)

DELAWARE	**88-0326081**
(State or other jurisdiction of incorporation or organization)	*(I.R.S. Employer Identification Number)*

6225 Neil Road, Reno, Nevada 89511-1136

(Address of principal executive offices, including zip code)

Registrant s telephone number, including area code:

(775) 356-9029

(Registrant s telephone number, including area code)

Securities Registered Pursuant to Section 12(b) of the Act:

Title of Each Class	Name of Each Exchange on Which Registered
Common Stock $0.001 Par Value	New York Stock Exchange

Securities Registered Pursuant to Section 12(g) of the Act:

None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ¨ No þ

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Exchange Act. Yes ¨ No þ

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes þ No ¨

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes þ No ¨

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant s knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. ¨

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of large accelerated filer, accelerated filer and smaller reporting company in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer ¨	Accelerated filer þ	Non-accelerated filer ¨	Smaller reporting company ¨
		(Do not check if a smaller reporting company)	

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ¨ No þ

As of June 30, 2012, the last business day of the registrant s most recently completed second fiscal quarter, the aggregate market value of the registrant s common stock held by non-affiliates of the registrant was $389,817,905 based on the closing price as reported on the New York Stock Exchange.

Indicate the number of shares outstanding of each of the registrant s classes of common stock as of the latest practicable date: As of February 28, 2013, the number of outstanding shares of common stock, par value $0.001 per share was 45,430,886.

Documents Incorporated by Reference: Part III (Items 10, 11, 12, 13 and 14) incorporates by reference portions of the Registrant s Proxy Statement for its Annual Meeting of Stockholders, which will be filed not later than 120 days after December 31, 2012.

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ORMAT TECHNOLOGIES, INC.

FORM 10-K FOR THE YEAR ENDED DECEMBER 31, 2012

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Glossary of Terms

When the following terms and abbreviations appear in the text of this report, they have the meanings indicated below:

Term	Definition
Amatitlan Loan	Initial $42,000,000 in aggregate principal amount borrowed by our subsidiary Ortitlan from TCW Global Project Fund II, Ltd.
AMM	Administrador del Mercado Mayorista (administrator of the wholesale market Guatemala)
ARRA	American Recovery and Reinvestment Act of 2009
Auxiliary Power	The power needed to operate a geothermal power plant s auxiliary equipment such as pumps and cooling towers
Availability	The ratio of the time a power plant is ready to be in service, or is in service, to the total time interval under consideration, expressed as a percentage, independent of fuel supply (heat or geothermal) or transmission accessibility
Balance of Plant equipment	Power plant equipment other than the generating units including items such as transformers, valves, interconnection equipment, cooling towers for water cooled power plants, etc.
BLM	Bureau of Land Management of the U.S. Department of the Interior
BOT	Build, operate and transfer
Capacity	The maximum load that a power plant can carry under existing conditions, less auxiliary power
Capacity Factor	The ratio of the average load on a generating resource to its generating capacity during a specified period of time, expressed as a percentage
CARB	California Air Resources Board
CDC	Commonwealth Development Corporation
CGC	Crump Geothermal Company LLC
CNE	National Energy Commission of Nicaragua
CNEE	National Electric Energy Commission of Guatemala
COD	Commercial Operation Date
Company	Ormat Technologies, Inc., a Delaware corporation, and its consolidated subsidiaries
COSO	Committee of Sponsoring Organizations of the Treadway Commission
CPI	Consumer Price Index
CPUC	California Public Utilities Commission
DEG	Deutsche Investitions-und Entwicklungsgesellschaft mbH
DFIs	Development Finance Institutions
DISNORTE	Empresa Distribudora de Electricidad del Norte (a Nicaragua distribution company)

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Term	Definition
DISSUR	Empresa Distribudora de Electricidad del Sur (a Nicaragua distribution company)
DOE	U.S. Department of Energy
DOGGR	California Division of Oil, Gas, and Geothermal Resources
DSCR	Debt Service Coverage Ratio
EBITDA	Earnings before interest, taxes, depreciation and amortization
EGS	Enhanced Geothermal Systems
EIS	Environmental Impact Statement
ENATREL	Empresa Nicaragüense de Transmision
ENEE	Empresa Nacional de Energía Eléctrica
ENEL	Empresa Nicaragüense de Electricidad
Enthalpy	The total energy control of a fluid; the heat plus the mechanical energy content of a fluid (such as a geothermal brine), which, for example, can be partially converted to mechanical energy in an Organic Rankine Cycle.
EPA	U.S. Environmental Protection Agency
EPC	Engineering, procurement and construction
EPS	Earnings per share
ERC	Kenyan Energy Regulatory Commission
ESC	Energy Sales Contract
Exchange Act	U.S. Securities Exchange Act of 1934, as amended
FASB	Financial Accounting Standards Board
FERC	U.S. Federal Energy Regulatory Commission
FPA	U.S. Federal Power Act, as amended
GAAP	Generally accepted accounting principles
GDC	Geothermal Development Company
GDL	Geothermal Development Limited
Geothermal Power Plant	The power generation facility and the geothermal field
Geothermal Steam Act	U.S. Geothermal Steam Act of 1970, as amended
GHG	Greenhouse gas
GNP	Gross National Product
HELCO	Hawaii Electric Light Company
IFC	International Finance Corporation
IID	Imperial Irrigation District
ILA	Israel Land Administration
INDE	Instituto Nacional de Electrification

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Term	Definition
INE	Nicaragua Institute of Energy
IPPs	Independent Power Producers
ISO	International Organization for Standardization
ITC	Investment tax credit
ITC Cash Grant	Payment for Specified Renewable Energy property in lieu of Tax Credits under Section 1603 of the ARRA
John Hancock	John Hancock Life Insurance Company (U.S.A.)
JPM	JPM Capital Corporation
KenGen	Kenya Electricity Generating Company Ltd.
Kenyan Energy Act	Kenyan Energy Act, 2006
KETRACO	Kenya Electricity Transmission Company Limited
KLP	Kapoho Land Partnership
KPLC	Kenya Power and Lighting Co. Ltd.
kVa	Kilovolt-ampere
kW	Kilowatt A unit of electrical power that is equal to 1,000 watts
kWh	Kilowatt hour(s), a measure of power produced
LNG	Liquefied natural gas
Mammoth Pacific	Mammoth-Pacific, L.P.
MACRS	Modified Accelerated Cost Recovery System
MIGA	Multilateral Investment Guaranty Agency, a member of the World Bank Group
MW	Megawatt One MW is equal to 1,000 kW or one million watts
MWh	Megawatt hour(s), a measure of power produced
NBPL	Northern Border Pipe Line Company
NIS	New Israeli Shekel
NGI	Natural Gas-California SoCal-NGI Natural Gas price index
NGP	Nevada Geothermal Power
NV Energy	NV Energy, Inc.
NYSE	New York Stock Exchange
OEC	Ormat Energy Converter
OFC	Ormat Funding Corp., a wholly owned subsidiary of the Company
OFC Senior Secured Notes	8.25% Senior Secured Notes, due 2020 issued by OFC
OFC 2	OFC 2 LLC, a wholly owned subsidiary of the Company
OFC 2 Senior Secured Notes	Senior Secured Notes, due 2034 issued by OFC 2
Olkaria Loan	Initial $105,000,000 in aggregate principal amount borrowed by OrPower 4 from a group of European DFIs

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Term	Definition
OMPC	Ormat Momotombo Power Company, a wholly owned subsidiary of the Company
OPC	OPC LLC, a consolidated subsidiary of the Company
OPC Transaction	Financing transaction involving four of our Nevada power plants in which institutional equity investors purchased an interest in our special purpose subsidiary that owns such plants.
OPIC	Overseas Private Investment Corporation
OrCal	OrCal Geothermal Inc., a wholly owned subsidiary of the Company
OrCal Senior Secured Notes	6.21% Senior Secured Notes, due 2020 issued by OrCal
Organic Rankine Cycle	A process in which an organic fluid such as a hydrocarbon or fluorocarbon (but not water) is boiled in an evaporator to generate high pressure vapor. The vapor powers a turbine to generate mechanical power. After the expansion in the turbine, the low pressure vapor is cooled and condensed back to liquid in a condenser. A cycle pump is then used to pump the liquid back to the vaporizer to complete the cycle. The cycle is illustrated in the figure below:
Ormat International	Ormat International Inc., a wholly owned subsidiary of the Company
Ormat Nevada	Ormat Nevada Inc., a wholly owned subsidiary of the Company
Ormat Systems	Ormat Systems Ltd., a wholly owned subsidiary of the Company
OrPower 4	OrPower 4 Inc., a wholly owned subsidiary of the Company
Ortitlan	Ortitlan Limitada, a wholly owned subsidiary of the Company
ORTP	ORTP, LLC, a consolidated subsidiary of the Company
Orzunil	Orzunil I de Electricidad, Limitada, a wholly owned subsidiary of the Company
Parent	Ormat Industries Ltd.
PG&E	Pacific Gas and Electric Company
PGV	Puna Geothermal Venture, a wholly owned subsidiary of the Company
PLN	PT Perusahaan Listrik Negara

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Term	Definition
Power plant equipment	Interconnection equipment, cooling towers for water cooled power plant, etc.
PPA	Power purchase agreement
ppm	Part per million
PTC	Production tax credit
PUA	Israeli Public Utility Authority
PUCH	Public Utilities Commission of Hawaii
PUCN	Public Utilities Commission of Nevada
PUHCA	U.S. Public Utility Holding Company Act of 1935
PUHCA 2005	U.S. Public Utility Holding Company Act of 2005
PURPA	U.S. Public Utility Regulatory Policies Act of 1978
Qualifying Facility(ies)	Certain small power production facilities are eligible to be Qualifying Facilities under PURPA, provided that they meet certain power and thermal energy production requirements and efficiency standards. Qualifying Facility status provides an exemption from PUHCA 2005 and grants certain other benefits to the Qualifying Facility
RAM	Renewable Auction Mechanism
REC	Renewable Energy Credit
REG	Recovered Energy Generation
RGGI	Regional Greenhouse Gas Initiative
RPM	Revolutions Per Minute
RPS	Renewable Portfolio Standards
SCPPA	Southern California Public Power Authority
SEC	U.S. Securities and Exchange Commission
Securities Act	U.S. Securities Act of 1933, as amended
Senior Unsecured Bonds	7% Senior Unsecured Bonds Due 2017 issued by the Company
SO#4	Standard Offer Contract No. 4
SOX Act	Sarbanes-Oxley Act of 2002
Solar PV	Solar photovoltaic
Southern California Edison	Southern California Edison Company
SPE(s)	Special purpose entity(ies)
SRAC	Short Run Avoided Costs
Sunday Energy	Sunday Energy Ltd.
TGL	Tikitere Geothermal Power Limited
Union Bank	Union Bank, N.A.
U.S.	United States of America
U.S. Treasury	U.S. Department of the Treasury
WHOH	Waste Heat Oil Heaters

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Cautionary Note Regarding Forward-Looking Statements

This annual report includes forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. All statements, other than statements of historical facts, included in this report that address activities, events or developments that we expect or anticipate will or may occur in the future, including such matters as our projections of annual revenues, expenses and debt service coverage with respect to our debt securities, future capital expenditures, business strategy, competitive strengths, goals, development or operation of generation assets, market and industry developments and the growth of our business and operations, are forward-looking statements. When used in this annual report, the words may , will , could , should , expects , plans , anticipates , believes , estimates , predicts , projects , poten the negative of these terms or other comparable terminology are intended to identify forward-looking statements, although not all forward-looking statements contain such words or expressions. The forward-looking statements in this annual report are primarily located in the material set forth under the headings Item 1A Risk Factors contained in Part I, Item 7 Management s Discussion and Analysis of Financial Condition and Results of Operations contained in Part II, and Notes to Financial Statements contained in Item 8 Financial Statements and Supplementary Data contained in Part II of this annual report, but are found in other locations as well. These forward-looking statements generally relate to our plans, objectives and expectations for future operations and are based upon management s current estimates and projections of future results or trends. Although we believe that our plans and objectives reflected in or suggested by these forward-looking statements are reasonable, we may not achieve these plans or objectives. You should read this annual report completely and with the understanding that actual future results and developments may be materially different from what we expect due to a number of risks and uncertainties, many of which are beyond our control. Other than as required by law, we will not update forward-looking statements even though our situation may change in the future.

Specific factors that might cause actual results to differ from our expectations include, but are not limited to:

- significant considerations, risks and uncertainties discussed in this annual report;
- geothermal resource risk (such as the heat content, useful life and geological formation of the reservoir);
- operating risks, including equipment failures and the amounts and timing of revenues and expenses;
- financial market conditions and the results of financing efforts;
- the impact of fluctuations in oil and natural gas prices on the energy price component under certain of our PPAs;
- environmental constraints on operations and environmental liabilities arising out of past or present operations, including the risk that we may not have, and in the future may be unable to procure, any necessary permits or other environmental authorizations;
- construction or other project delays or cancellations;
- political, legal, regulatory, governmental, administrative and economic conditions and developments in the United States and other countries in which we operate;
- the enforceability of the long-term PPAs for our power plants;

contract counterparty risk;

weather and other natural phenomena including earthquakes and other nature disasters;

the impact of recent and future federal, state and local regulatory proceedings and changes, including legislative and regulatory initiatives regarding deregulation and restructuring of the electric utility industry, public policies and government incentives that support renewable energy and enhance the economic feasibility of our projects at the federal and state level in the United States and elsewhere, and carbon-related legislation;

changes in environmental and other laws and regulations to which our company is subject, as well as changes in the application of existing laws and regulations;

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current and future litigation;

our ability to successfully identify, integrate and complete acquisitions;

competition from other existing geothermal energy projects and new geothermal energy projects developed in the future, and from alternative electricity producing technologies;

market or business conditions and fluctuations in demand for energy or capacity in the markets in which we operate;

the direct or indirect impact on our company s business resulting from the threat or occurrence of terrorist incidents or cyber-attacks or responses to such threatened or actual incidents or attacks, including the effect on the availability of and premiums on insurance;

development and construction of the Solar PV projects may not materialize as planned;

the effect of and changes in current and future land use and zoning regulations, residential, commercial and industrial development and urbanization in the areas in which we operate; and

other uncertainties which are difficult to predict or beyond our control and the risk that we may incorrectly analyze these risks and forces or that the strategies we develop to address them may be unsuccessful.

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PART I

ITEM 1. ***BUSINESS***

Certain Definitions

Unless the context otherwise requires, all references in this annual report to Ormat , the Company , we , us , our company , Ormat Technologi our refer to Ormat Technologies, Inc. and its consolidated subsidiaries. A glossary of certain terms and abbreviations used in this annual report appears at the beginning of this report.

Overview

We are a leading vertically integrated company primarily engaged in the geothermal and recovered energy power business. We design, develop, build, own, and operate clean, environmentally friendly geothermal and recovered energy-based power plants, usually using equipment that we design and manufacture.

Our geothermal power plants include both power plants that we have built and power plants that we have acquired, while all of our recovered energy-based plants have been constructed by us. We conduct our business activities in the following two business segments:

The Electricity Segment in this segment we develop, build, own and operate geothermal and recovered energy-based power plants in the United States and geothermal power plants in other countries around the world and sell the electricity they generate. We have expanded our activities in the Electricity Segment to include the ownership and operation of power plants that produce electricity generated by Solar PV systems that we do not manufacture; and

The Product Segment in this segment we design, manufacture and sell equipment for geothermal and recovered energy-based electricity generation, remote power units and other power generating units and provide services relating to the engineering, procurement, construction, operation and maintenance of geothermal and recovered energy-based power plants.

The map below shows our current worldwide portfolio of operating geothermal power plants and recovered energy plants and the geothermal, recovered energy-based and Solar PV power plants that are under construction.

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The charts below show the relative contributions of the Electricity Segment and the Product Segment to our consolidated revenues and the geographical breakdown of our segment revenues for our fiscal year ended December 31, 2012. Additional information concerning our segment operations, including year-to-year comparisons of revenues, the geographical breakdown of revenues, cost of revenues, results of operations, and trends and uncertainties is provided below in Item 7 Management s Discussion and Analysis of Financial Condition and Results of Operations and Item 8 Financial Statements and Supplementary Data .

The following chart sets forth a breakdown of our revenues for each of the years ended December 31, 2011 and 2012:

The following chart sets forth the geographical breakdown of the revenues attributable to our Electricity and Product Segments for each of the years ended December 31, 2011 and 2012:

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Most of the power plants that we currently own or operate produce electricity from geothermal energy sources. Geothermal energy is a clean, renewable and generally sustainable form of energy derived from the natural heat of the earth. Unlike electricity produced by burning fossil fuels, electricity produced from geothermal energy sources is produced without emissions of certain pollutants such as nitrogen oxide, and with far lower emissions of other pollutants such as carbon dioxide. As a result, electricity produced from geothermal energy sources contributes significantly less to global warming and local and regional incidences of acid rain than energy produced by burning fossil fuels. Geothermal energy is also an attractive alternative to other sources of energy as part of a national diversification strategy to avoid dependence on any one energy source or politically sensitive supply sources.

In addition to our geothermal energy business, we manufacture products that produce electricity from recovered energy or so-called waste heat . We also construct, own, and operate recovered energy-based power plants. Recovered energy represents residual heat that is generated as a by-product of gas turbine-driven compressor stations, solar thermal units and a variety of industrial processes, such as cement manufacturing. Such residual heat, which would otherwise be wasted, may be captured in the recovery process and used by recovered energy power plants to generate electricity without burning additional fuel and without additional emissions.

We have expanded our activity to the Solar PV industry. We are constructing a new Solar PV project near our Heber complex in California that we expect to come on-line at the end of 2013. In recent years we did development work on Solar PV projects in Israel, but the recent reduction of the feed-in tariff in Israel reduced the potential economic viability of Solar PV projects in Israel and therefore we are evaluating the continued development of some of these projects.

Company Contact and Sources of Information

We file annual, quarterly and periodic reports, proxy statements and other information with the SEC. You may obtain and copy any document we file with the SEC at the SEC s Public Reference Room at 100 F Street, N.E., Room 1580, Washington D.C. 20549. You may obtain information on the operation of the SEC s Public Reference Room by calling the SEC at 1-800-SEC-0330. The SEC maintains an internet website at http://www.sec.gov that contains reports, proxy and other information statements, and other information regarding issuers that file electronically with the SEC. Our SEC filings are accessible via the internet at that website.

Our reports on Form 10-K, 10-Q and 8-K, and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act are available through our website at www.ormat.com for downloading, free of charge, as soon as reasonably practicable after these reports are filed with the SEC. Our Code of Business Conduct and Ethics, Code of Ethics Applicable to Senior Executives, Audit Committee

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Charter, Corporate Governance Guidelines, Nominating and Corporate Governance Committee Charter, Compensation Committee Charter, and Insider Trading Policy, as amended, are also available at our website address mentioned above. If we make any amendments to our Code of Business Conduct and Ethics or Code of Ethics Applicable to Senior Executives or grant any waiver, including any implicit waiver, from a provision of either code applicable to our Chief Executive Officer, Chief Financial Officer or principal accounting officer requiring disclosure under applicable SEC rules, we intend to disclose the nature of such amendment or waiver on our website. The content of our website, however, is not part of this annual report.

You may request a copy of our SEC filings, as well as the foregoing corporate documents, at no cost to you, by writing to the Company address appearing in this annual report or by calling us at (775) 356-9029.

Our Power Generation Business (Electricity Segment)

Power Plants in Operation

The table below summarizes certain key non-financial information relating to our power plants as of February 15, 2013. The generating capacity of certain of our power plants listed below has been updated to reflect changes in the resource temperature and other factors that impact resource capabilities:

Power Plant	Location	Ownership[1]	Generating Capacity in MW[2]
Domestic			
Geothermal			
Brady Complex[3]	Nevada	100%	20.0
Heber Complex[4]	California	100%	92.0
Jersey Valley[5]	Nevada	100%	12.0
Mammoth Complex[6]	California	100%	29.0
McGinness Hills[7]	Nevada	100%	33.0
North Brawley[8]	California	100%	27.0
Ormesa Complex	California	100%	54.0
Puna Complex	Hawaii	100%	38.0
Steamboat Complex[3]	Nevada	100%	83.0
Tuscarora	Nevada	100%	18.0
REG			
OREG 1	North and South Dakota	100%	22.0
OREG 2	Montana, North Dakota and Minnesota	100%	22.0
OREG 3	Minnesota	100%	5.5
OREG 4[9]	Colorado	100%	3.5
Total for domestic power plants			**459.0**
Foreign			
Geothermal			
Amatitlan	Guatemala	100%	18.0
Momotombo	Nicaragua	100%	22.0
Olkaria III Complex	Kenya	100%	52.0
Zunil	Guatemala	100%	24.0
Total for foreign power plants			**116.0**
Total for all power plants			**575.0**

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(1) We own and operate all of our power plants other than the Momotombo power plant in Nicaragua, which we do not own but which we control and operate through a concession arrangement with the Nicaraguan government until mid-2014. Financial institutions hold equity interests in two of our consolidated subsidiaries: (i) OPC, which owns the Desert Peak 2 power plant in our Brady complex and the Steamboat Hills, Galena 2 and Galena 3 power plants in our Steamboat complex; and (ii) ORTP, which owns the Heber complex, the Ormesa complex, the Mammoth complex, the Steamboat 2 and 3 and Burdette (Galena 1) power plants both in our Steamboat complex, and Brady power plant in our Brady complex. In the above table, we show these power plants as being 100% owned because all of the generating capacity is owned by either OPC or ORTP and we control the operation of the power plants. The nature of the equity interests held by the financial institutions is described in Item 7 Management s Discussion and Analysis of Financial Condition and Results of Operations under the heading OPC Transaction and ORTP Transaction .

(2) References to generating capacity generally refer to the gross capacity less auxiliary power, in the case of all of our existing domestic and foreign power plants, except for the Zunil power plant. We determine the generating capacity figures in these power plants by taking into account resource capabilities. In the case of the Zunil power plant, the revenues are calculated based on 24 MW capacity unrelated to the actual performance of the reservoir. This column represents our net ownership in such generating capacity.

In any given year, the actual power generation of a particular power plant may differ from that power plant s generating capacity due to variations in ambient temperature, the availability of the resource, and operational issues affecting performance during that year. The Capacity Factor of our operating power plants in 2012, excluding the Jersey Valley power plant, which operates at partial load (see footnote 5), was approximately 88%.

(3) The generating capacity of the Brady and Steamboat complexes declined due to a drop in the resource temperature. See Description of Our Power Plants below.

(4) The Heber complex generating capacity takes into account the enhancement work that is currently being conducted. See Description of Our Power Plants below.

(5) The Jersey Valley power plant is not operating at full capacity. Detailed information on the Jersey Valley power plant is provided under Description of Our Power Plants below.

(6) The Mammoth complex generating capacity takes into account the enhancement work that is currently being conducted. See Description of Our Power Plants below.

(7) The McGinness Hills power plant commenced commercial operation on July 1, 2012.

(8) Following recent developments, detailed under Description of Our Power Plants below, we have decided to operate the North Brawley power plant at its current capacity level of approximately 27 MW.

(9) The OREG 4 power plant is not operating at full capacity as a result of continued low run time of the compressor station that serves as the plant sheat source, which is resulting in low power generation.

All of the revenues that we currently derive from the sale of electricity are pursuant to long-term PPAs. Approximately 59.6% of our total revenues in the year ended December 31, 2012 from the sale of electricity by our domestic power plants were derived from power purchasers that currently have investment grade credit ratings. The purchasers of electricity from our foreign power plants are either state-owned or private entities.

New Power Plants

We are currently in various stages of construction and development of new power plants and expansion of existing power plants. Our growth plan includes 78 MW in generating capacity from geothermal and Solar PV power plants in the United States and Kenya that are fully released for construction with 62 MW expected to be completed by the end of 2013 and the rest in 2014. In addition, we have several projects under various stages of initial construction and development with a total capacity of up to approximately 167 MW.

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We have a substantial land position across 41 sites, mostly in the U.S., that are expected to support future geothermal development, on which we have started or plan to start exploration activity. This land position is comprised of various leases, exploration concessions for geothermal resources and an option to enter into geothermal leases.

Our Product Business (Product Segment)

We design, manufacture and sell products for electricity generation and provide the related services described below. Generally, we manufacture products only against customer orders and do not manufacture products for our own inventory.

Power Units for Geothermal Power Plants. We design, manufacture and sell power units for geothermal electricity generation, which we refer to as OECs. Our customers include contractors and geothermal power plant owners and operators.

Power Units for Recovered Energy-Based Power Generation. We design, manufacture and sell power units used to generate electricity from recovered energy, or so-called waste heat . This heat is generated as a residual by-product of gas turbine-driven compressor stations, solar thermal units and a variety of industrial processes, such as cement manufacturing, and is not otherwise used for any purpose. Our existing and target customers include interstate natural gas pipeline owners and operators, gas processing plant owners and operators, cement plant owners and operators, and other companies engaged in other energy-intensive industrial processes.

EPC of Power Plants. We engineer, procure, and construct, as an EPC contractor, geothermal and recovered energy power plants on a turnkey basis, using power units we design and manufacture. Our customers are geothermal power plant owners as well as the same customers described above that we target for the sale of our power units for recovered energy-based power generation. Unlike many other companies that provide EPC services, we believe we have an advantage in that we are using our own manufactured equipment and thus have better control over the timing and delivery of required equipment and its related costs.

Remote Power Units and Other Generators. We design, manufacture and sell fossil fuel powered turbo-generators with a capacity ranging between 200 watts and 5,000 watts, which operate unattended in extreme hot or cold climate conditions. Our customers include contractors installing gas pipelines in remote areas. In addition, we design, manufacture, and sell generators for various other uses, including heavy duty direct-current generators.

History

We were formed as a Delaware corporation in 1994 by Ormat Industries Ltd. (also referred to in this annual report as the Parent , Ormat Industries , the parent company , or our parent). Ormat Industries was one of the first companies to focus on the development of equipment for the production of clean, renewable and generally sustainable forms of energy. Ormat Industries owns approximately 60% of our outstanding common stock.

Industry Background

Geothermal Energy

Most of our power plants in operation produce electricity from geothermal energy. There are several different sources or methods to obtain geothermal energy, which are described below.

Hydrothermal geothermal-electricity generation Hydrothermal geothermal energy is derived from naturally occurring hydrothermal reservoirs that are formed when water comes sufficiently close to hot rock to heat the water to temperatures of 300 degrees Fahrenheit or more. The heated water then ascends toward the surface of the earth where, if geological conditions are suitable for its commercial extraction, it can be extracted by drilling geothermal wells. Geothermal production wells are normally located within several miles of the power plant, as it is not economically viable to transport geothermal fluids over longer distances due to heat and pressure loss. The geothermal reservoir is a renewable source of energy if natural ground water sources and reinjection of extracted geothermal fluids are adequate over the long-term to replenish the geothermal reservoir following the withdrawal of

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geothermal fluids and if the well field is properly operated. Geothermal energy power plants typically have higher capital costs (primarily as a result of the costs attributable to well field development) but tend to have significantly lower variable operating costs (principally consisting of maintenance expenditures) than fossil fuel-fired power plants that require ongoing fuel expenses. In addition, because geothermal energy power plants produce weather-independent power 24 hours a day, the variable operating costs are lower.

EGS An EGS is a subsurface system that may be artificially created to extract heat from hot rock where the permeability and aquifers required for a hydrothermal system, are insufficient or non-existent. A geothermal power plant that uses EGS techniques recovers the thermal energy from the subsurface rocks by creating or accessing a system of open fractures in the rock through which water can be injected, heated through contact with the hot rock, returned to the surface in production wells and transferred to a power unit.

Co-produced geothermal from oil and gas fields, geo-pressurized resources Another source of geothermal energy is hot water produced from oil and gas production. In some oil and gas fields, water is produced as a by-product of the oil and gas extraction. When the wells are deep the fluids are often at high temperatures and if the water volume is significant, the hot water can be used for power generation in equipment similar to a geothermal power plant.

Geothermal Power Plant Technologies

Geothermal power plants generally employ either binary systems or conventional flash design systems, as shortly described below. In our geothermal power plants, we also employ our proprietary technology of combined geothermal cycle systems.

Binary System

In a geothermal power plant using a binary system, geothermal fluid (either hot water (also called brine) or steam or both) is extracted from the underground reservoir and flows from the wellhead through a gathering system of insulated steel pipelines to a vaporizer that also heats a secondary working fluid. This is typically an organic fluid, such as isopentane or isobutene, which is vaporized and is used to drive the turbine. The organic fluid is then condensed in a condenser which may be cooled by air or by water from a cooling tower and sent back to the vaporizer. The cooled geothermal fluid is then reinjected back into the reservoir. Ormat s air-cooled binary geothermal power plant is depicted in the diagram below.

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Flash Design System

In a geothermal power plant using flash design, geothermal fluid is extracted from the underground reservoir and flows from the wellhead through a gathering system of insulated steel pipelines to flash tanks and/or separators. There, the steam is separated from the brine and is sent to a demister in the plant, where any remaining water droplets are removed. This produces a stream of dry saturated steam, which drives a turbine generator to produce electricity. In some cases, the brine at the outlet of the separator is flashed a second time (dual flash), providing additional steam at lower pressure used in the low pressure section of the steam turbine to produce additional electricity. Steam exhausted from the steam turbine is condensed in a surface or direct contact condenser cooled by cold water from a cooling tower. The non-condensable gases (such as carbon dioxide) are removed through the removal system in order to optimize the performance of the steam turbines. The resulting condensate is used to provide make-up water for the cooling tower. The hot brine remaining after separation of steam is injected back into the geothermal resource through a series of injection wells. The flash technology is depicted in the diagram below.

In some instances, the wells directly produce dry steam (with the flashing occurring underground) and the steam is fed directly to the steam turbine with the rest of the system similar to the flash power plant described above.

Ormat s Proprietary Technology

Our proprietary technology may be used in power plants operating according to the Organic Rankine Cycle, either alone or in combination with various other commonly used thermodynamic technologies that convert heat to mechanical power, such as gas and steam turbines. It can be used with a variety of thermal energy sources, such as geothermal, recovered energy, biomass, solar energy and fossil fuels. Specifically, our technology involves original designs of turbines, pumps, and heat exchangers, as well as formulation of organic motive fluids (all of which are non-ozone-depleting substances). Using advanced computerized fluid dynamics and other computer aided design software as well as our test facilities, we continuously seek to improve power plant components, reduce operations and maintenance costs, and increase the range of our equipment and applications. We are examining ways to increase the output of our plants by utilizing evaporative cooling, cold reinjection, performance simulation programs, and topping turbines. In the geothermal as well as the recovered energy (waste heat) areas, we are examining two-level and three-level energy systems and new motive fluids.

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We also developed, patented and construct Geothermal Combined Cycle (GCCU) power plants in which the steam first produces power in a backpressure steam turbine and is subsequently condensed in a vaporizer of a binary plant, which produces additional power. Ormat Geothermal Combined Cycle technology is depicted in the diagram below.

In the conversion of geothermal energy into electricity, our technology has a number of advantages compared with conventional geothermal steam turbine plants. A conventional geothermal steam turbine plant consumes significant quantities of water, causing depletion of the aquifer, and also requires cooling water treatment with chemicals and thus a need for the disposal of such chemicals. A conventional geothermal steam turbine plant also creates a significant visual impact in the form of an emitted plume from the cooling towers, especially during cold weather. By contrast, our binary and combined cycle geothermal power plants have a low profile with minimum visual impact and do not emit a plume when they use air cooled condensers. Our binary and combined cycle geothermal power plants reinject all of the geothermal fluids utilized in the respective processes into the geothermal reservoir. Consequently, such processes generally have no emissions.

Other advantages of our technology include simplicity of operation and easy maintenance, low RPM, temperature and pressure in the OEC, a high efficiency turbine and the fact that there is no contact between the turbine itself and often corrosive geothermal fluids.

We use the same elements of our technology in our recovered energy products. The heat source may be exhaust gases from a simple cycle gas turbine, low pressure steam, or medium temperature liquid found in the process industries such as refineries and cement plants. In most cases, we attach an additional heat exchanger in which we circulate thermal oil to transfer the heat into the OEC s own vaporizer in order to provide greater operational flexibility and control. Once this stage of each recovery is completed, the rest of the operation is identical to the OEC used in our geothermal power plants and enjoys the same advantages of using the Organic Rankine Cycle. In addition, our technology allows for better load following than conventional steam turbines exhibit, requires no water treatment (since it is air cooled), and does not require the continuous presence of a licensed steam boiler operator on site.

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Ormat s REG technology is depicted in the diagram below.

Patents

We have been granted 82 U.S. patents (and have approximately 28 U.S. patents pending) that cover our products (mainly power units based on the Organic Rankine Cycle) and systems (mainly geothermal power plants and industrial waste heat recovery plants for electricity production). The products-related patents cover components that include turbines, heat exchangers, seals and controls. The system-related patents cover not only a particular component but also the overall energy conversion system from the fuel supply (e.g., geothermal fluid, waste heat, biomass or solar) to electricity production.

They also cover the subjects such as waste heat recovery related to gas pipelines compressors, disposal of non-condensable gases present in geothermal fluids, power plants for very high pressure geothermal resources, and use of two-phase fluids as well as processes related to EGS. A number of patents cover combined cycle geothermal power plants, in which the steam first produces power in a backpressure steam turbine and is subsequently condensed in a vaporizer of a binary plant, which produces additional power. The terms of our patents range from one year to 17 years. The loss of any single patent would not have a material effect on our business or results of operations.

Research and Development

We are conducting research and development of new EGS technologies and their application to increase the fluid supply at our existing plants by enhancing production of existing wells without drilling any additional wells. We are undertaking this development effort at our Desert Peak 2 and Brady power plants in Nevada in cooperation with GeothermEx Inc., and a number of universities and national laboratories, with funding support from the DOE. Other research and development activity co-funded by the DOE includes testing of new exploration technologies.

We are also continuing with our research and development activities intended to improve plant performance, reduce costs, and increase the breadth of product offerings. The primary focus of our research and development efforts includes continued improvements to our condensing equipment with improved performance and lower land usage and developing new turbines and specialized remote power units.

Additionally, we are continuing to evaluate investment opportunities in new companies with product offerings for renewable energy markets.

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Market Opportunity

Interest in geothermal energy in the United States remains strong as a result of legislative and regulatory support for renewable energy, and the baseload nature of geothermal energy generation. We believe that the legislative measures and initiatives discussed below present a significant market opportunity for us.

Although electricity generation from geothermal resources is currently concentrated mainly in California, Nevada, Hawaii, Idaho and Utah, we believe there are opportunities for development in other states such as Alaska, Arizona, New Mexico, Washington and Oregon due to the potential of geothermal resources and, in some cases, a favorable regulatory environment in such states.

The Western Governors Association estimated in 2006 that 13,000 MW of identified geothermal resources will be developed by 2025. In a report issued in April 2012, the Geothermal Energy Association identified a total of 147 confirmed and unconfirmed geothermal projects under various phases of consideration or development in 15 U.S. states that have between 5,317 MW and 5,836 MW potential capacity.

The assessments conducted by the Western Governors Association and the Geothermal Energy Association are estimates only. We refer to them only as two possible reference points, but we do not necessarily concur with those estimates.

An additional factor fueling recent growth in the renewable energy industry is the global concern about the environment. Power plants that use fossil fuels generate higher levels of air pollution and their emissions have been linked to acid rain and global warming. In response to an increasing demand for green energy, many countries have adopted legislation requiring, and providing incentives for, electric utilities to sell electricity generated from renewable energy sources. In the United States, approximately 40 states have adopted RPS, renewable portfolio goals, or similar laws requiring or encouraging electric utilities in such states to generate or buy a certain percentage of their electricity from renewable energy sources or recovered heat sources.

According to the Database of State Incentives for Renewables and Efficiency (DSIRE), 22 states (including California, Nevada, and Hawaii, where we have been the most active in our geothermal energy development and in which all of our U.S. geothermal power plants in operation are located) and the District of Colombia define geothermal resources as renewable . In addition, according to the EPA, 23 states have enacted RPS or Alternative Portfolio Standards program guidelines that include some form of combined heat and power and/or waste heat recovery.

We expect that the additional demand for renewable energy from utilities in states with RPS will outpace a possible reduction in general demand for energy (if any) due to the effect of general economic conditions. We see this increased demand and, in particular, the impact of the RPS legislation and the increase in California s RPS to 33% by 2020, as the most significant driver for us to expand existing power plants and to build new projects. California s three large investor-owned utilities collectively served 19.9% of their 2012 retail electricity sales with renewable power. On July 31, 2012, the CPUC issued its renewable energy progress report for the first/second quarters of 2012, which showed that the state s utilities have met the goal of serving 20% of their electricity with renewable energy and are on track to surpass that goal in 2012. These utilities have interim targets each year, with a requirement of 25% by 2016 increasing by 2% every year to 33% by the end of 2020. Publicly-owned utilities in California are required to procure 33% of retail electricity sales from eligible renewable energy resources by 2020, opening up a new market of potential off-takers for us. These utilities do not have interim targets. Nevada s RPS requires NV Energy to supply at least 25% of the total electricity it sells from eligible renewable energy resources by 2025. In 2011, 18.9% of the electricity retail sales in Nevada were from renewable energy sources. Hawaii s RPS require each electric utility that sells electricity for consumption in Hawaii to obtain 15% of its net electricity sales from renewable energy sources by December 31, 2015, 20% by December 31, 2020, and 40% by 2030. In 2011, Hawaiian Electric Company and its subsidiaries achieved a consolidated RPS of 24.5%.

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In 2006, California passed a state climate change law, AB 32, to reduce GHG emissions to 1990 levels by the end of 2020, and in December 2010, the California Air Resources Board (CARB) approved cap-and-trade regulations to reduce California s GHG emissions under AB 32. The regulations will set a limit on emissions from sources responsible for emitting 80% of California s GHGs. On November 14, 2012, CARB held its first auction, and sold allowances at the lowest market clearing price and mandated a reserve price of $10.00 per allowance. On November 19, 2012 the CARB released results from the auction showing a market clearing price of $10.09 for the 2013 allowances period and the reserve price of $10.00 for 2015 allowances. One hundred percent of the available 2013 allowances were sold, while only 14% of the available 2015 allowances were sold. The CARB will continue to hold auctions on a quarterly basis.

Other state-wide and regional initiatives are also being developed to reduce GHG emissions and to develop trading systems for renewable energy credits. For example, nine Northeast region and Mid-Atlantic states are part of the RGGI, a regional cap-and-trade system to limit carbon dioxide. The RGGI is the first mandatory, market-based carbon dioxide emissions reduction program in the United States. Under RGGI, the participating states plan to reduce carbon emissions from power plants by 10%, at a rate of 2.5% per year between 2015 and 2018.

In addition to RGGI, other states have also established the Midwestern Regional Greenhouse Gas Reduction Accord and the Western Climate Initiative. Although individual and regional programs will take some time to develop, their requirements, particularly the creation of any market-based trading mechanism to achieve compliance with emissions caps, should be advantageous to in-state and in-region (and, in some cases, such as RGGI and the State of California, inter-regional) energy generating sources that have low carbon emissions such as geothermal energy. Although it is currently difficult to quantify the direct economic benefit of these efforts to reduce GHG emissions, we believe they will prove advantageous to us.

At the federal level as of 2012, the EPA s Tailoring Rule sets thresholds for when permitting requirements under the Clean Air Act s Prevention of Significant Deterioration and Title V programs apply to certain major sources of GHG emissions.

The federal government also encourages production of electricity from geothermal resources through certain tax subsidies. If we start construction of a new geothermal power plant in the U.S. by December 31, 2013, then we are permitted to claim a tax credit against our U.S. federal income taxes equal to 30% of certain eligible costs when the project is placed in service. If we fail to meet the start of construction deadline for such a project, then the 30% credit is reduced to 10%. In lieu of the 30% tax credit (if the project qualifies), we are permitted to claim a tax credit based on the power produced from a geothermal power plant. These production-based credits, which in 2012 were 2.2 cents per kWh, are adjusted annually for inflation and may be claimed for ten years on the electricity produced by the project and sold to third parties after the project is placed in service. The owner of the power plant may not claim both the 30% tax credit and the production-based tax credit. Under current tax rules, any unused tax credit has a one-year carry back and a twenty-year carry forward. An alternative to these credits is a cash grant from the U.S. Treasury. However, it is only available for certain power plants placed in service by the end of 2011, or on which construction began in 2009, 2010 or 2011 and that are completed by the end of 2013.

Whether we claim tax credits or a cash grant, we are also permitted to depreciate, or write off, most of the cost of the plant. If we claim the one-time 30% (or 10%) tax credit or receive the Treasury cash grant, our tax basis in the plant that we can recover through depreciation must be reduced by one-half of the tax credit or cash grant; if we claim other tax credits, there is no reduction in the tax basis for depreciation. For projects that we placed into service after September 8, 2010 and before January 1, 2012, a depreciation bonus will permit us to write off 100% of the cost of certain equipment that is part of the geothermal power plant in the year the plant is placed into service, if certain requirements are met. For projects that are placed into service after December 31, 2011 and before January 1, 2013, a similar bonus will permit us to write off 50% of the cost of that equipment in the year the power plant is placed into service. After applying any depreciation bonus that is available, we can write off the remainder of our tax basis in the plant, if any, over five years on an accelerated basis, meaning that more of the cost may be deducted in the first few years than during the remainder of the depreciation period.

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Collectively, these benefits (to the extent fully utilized) have a present value equivalent to approximately 30% to 40% of the capital cost of a new power plant.

Operations outside of the United States may be subject to and/or benefit from requirements under the Kyoto Protocol. In November 2012, the United Nations Climate Change Conference was held in Doha, Qatar. The conference encompassed the 18th Conference of the Parties to the United Nations Framework Convention on Climate Change and the 8th meeting of the Parties to the Kyoto Protocol. Countries have successfully launched a new commitment period under the Kyoto Protocol, agreed upon a firm timetable to adopt a universal climate agreement by 2015 and agreed to a path to raise necessary awareness to respond to climate change. They also endorsed the completion of new institutions and agreed to ways and means to deliver scaled-up climate finance and technology to developing countries. The next Conference of the Parties is scheduled to take place in Warsaw, Poland, at the end of 2013. Earlier in 2012, at the Rio+20 Conference, which took place in Rio de Janeiro, Brazil, world leaders, along with thousands of participants from the private sector, NGOs and other groups, came together to discuss how to reduce poverty, advance social equity and ensure environmental protection on an ever-more crowded planet. A total of 193 Member States of the United Nations finalized an agreement that aims to advance action on sustainable development.

Outside of the United States, the majority of power generating capacity has historically been owned and controlled by governments. Since the early 1990s, however, many foreign governments have privatized their power generation industries through sales to third parties and have encouraged new capacity development and/or refurbishment of existing assets by independent power developers. These foreign governments have taken a variety of approaches to encourage the development of competitive power markets, including awarding long-term contracts for energy and capacity to independent power generators and creating competitive wholesale markets for selling and trading energy, capacity, and related products. Some countries have also adopted active governmental programs designed to encourage clean renewable energy power generation. Several Latin American countries have rural electrification programs and renewable energy programs. For example, in November 2003 Guatemala, where our Zunil and Amatitlan power plants are located, approved a law which created incentives for power generation from renewable energy sources by, among other things, providing economic and fiscal incentives such as exemptions from taxes on the importation of relevant equipment and various tax exemptions for companies implementing renewable energy projects. In Chile, where we were recently awarded six exploration concessions, the Chilean Renewable Energy Act of 2008 currently requires that 5% of electricity sold come from renewable sources, increasing gradually to 10% by 2024. Another example is New Zealand, where we and our Parent have been actively designing and supplying geothermal power solutions since 1986. The New Zealand government s policies to fight climate change include a target for GHG emissions reductions of between 10% and 20% below 1990 levels by 2020 and the target of increasing renewable electricity generation to 90% of New Zealand s total electricity generation by 2025. In Indonesia, the government has implemented policies and regulations intended to accelerate the development of renewable energy and geothermal projects in particular. These include designating approximately 4,000 MW of geothermal projects in its second phase of power acceleration projects to be implemented by 2014, of which the majority is IPP projects and the remaining state utility PLN projects. For the IPP sector, certain regulations for geothermal projects have been implemented providing for incentives such as investment tax credits and accelerated depreciation, and pricing guidelines intended to allow preferential power prices for generators; other regulation are being discussed. In addition, there is a regulation providing feed-in tariffs for small scale renewable energy projects up to 10 MW. On a macro level, the Government of Indonesia committed at the United Nations Climate Change Conference 2009 in Copenhagen to reduce its CO_2 emissions by 26% by 2020, which is intended to be achieved mainly through prevention of deforestation and accelerated renewable energy development.

We believe that these developments and governmental plans will create opportunities for us to acquire and develop geothermal power generation facilities internationally, as well as create additional opportunities for our Product Segment.

In addition to our geothermal power generation activities, we are pursuing recovered energy-based power generation opportunities in North America and the rest of the world. We believe recovered energy-based power

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generation may benefit from the increased attention to energy efficiency. For example, in the United States, the FERC has expressed its position that one of the goals of new natural gas pipeline design should be to facilitate the efficient, low-cost transportation of fuel through the use of waste heat (recovered energy) from combustion turbines or reciprocating engines that drive station compressors to generate electricity for use at compressor stations or for commercial sale. FERC has, as a matter of policy, requested natural gas pipeline operators filing for a certificate of approval for new pipeline construction or expansion projects to examine opportunities to enhance efficiencies for any energy consumption processes in the development and operation of the new pipeline. We have initially targeted the North American market, where we have built over 20 power plants which generate electricity from waste heat from gas turbine-driven compressor stations along interstate natural gas pipelines, from midstream gas processing facilities, and from processing industries in general.

Several states, and to a certain extent, the federal government, have recognized the environmental benefits of recovered energy-based power generation. For example, 13 states currently allow electric utilities to include recovered energy-based power generation in calculating such utilities compliance with their mandatory or voluntary RPS. In addition, California recently modified the Self Generation Incentive Program (SGIP), which allows recovered energy-based generation to qualify for a per watt incentive. North Dakota, South Dakota, and the U.S. Department of Agriculture (through the Rural Utilities Service) have approved recovered energy-based power generation units as renewable energy resources, which qualifies recovered energy-based power generators for federally funded, low interest loans. Recovery of waste heat is also considered environmentally friendly in the western Canadian provinces. We believe that Europe and other markets worldwide may offer similar opportunities in recovered energy-based power generation.

The market for Solar PV power grew significantly in recent years, driven by a combination of favorable government policies and a decline in equipment prices. We are monitoring market drivers in various regions with a view to developing Solar PV power plants in those locations where we can offer competitively priced power generation.

Competitive Strengths

Competitive Assets. We believe our assets are competitive for the following reasons:

Contracted Generation. All of the electricity generated by our geothermal power plants is currently sold pursuant to long-term PPAs.

Baseload Generation. All of our geothermal power plants supply all or a part of the baseload capacity of the electric system in their respective markets. This means they supply electric power on an around-the-clock basis. This provides us a with competitive advantage over other renewable energy sources, such as wind power, solar power or hydro-electric power (to the extent dependent on precipitation), which cannot serve baseload capacity because of their weather dependence and resulting intermittent nature of these other renewable energy sources.

Competitive Pricing. Geothermal power plants, while site specific, are economically feasible to develop, construct, own, and operate in many locations, and the electricity they generate is generally price competitive under existing economic conditions and existing tax and regulatory regimes compared to electricity generated from fossil fuels or other renewable sources.

Ability to Finance Our Activities from Internally Generated Cash Flow. The cash flow generated by our portfolio of operating geothermal and REG power plants provides us with a robust and predictable base for certain exploration, development, and construction activities.

Growing Legislative Demand for Environmentally-Friendly Renewable Resource Assets. Most of our currently operating power plants produce electricity from geothermal energy sources. The clean and sustainable characteristics of geothermal energy give us a competitive advantage over fossil fuel-based electricity generation as countries increasingly seek to balance environmental concerns with demands for reliable sources of electricity.

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High Efficiency from Vertical Integration. Unlike our competitors in the geothermal industry, we are a fully-integrated geothermal equipment, services, and power provider. We design, develop, and manufacture equipment that we use in our geothermal and REG power plants. Our intimate knowledge of the equipment that we use in our operations allows us to operate and maintain our power plants efficiently and to respond to operational issues in a timely and cost-efficient manner. Moreover, given the efficient communications among our subsidiary that designs and manufactures the products we use in our operations and our subsidiaries that own and operate our power plants, we are able to quickly and cost effectively identify and repair mechanical issues and to have technical assistance and replacement parts available to us as and when needed.

Exploration and Drilling Capabilities. We have in-house capabilities to explore and develop geothermal resources and have established a drilling subsidiary that currently owns nine drilling rigs. We employ an experienced resource group that includes engineers, geologists, and drillers, which executes our exploration and drilling plans for projects that we develop.

Highly Experienced Management Team. We have a highly qualified senior management team with extensive experience in the geothermal power sector. Key members of our senior management team have worked in the power industry for most of their careers and average over 25 years of industry experience.

Technological Innovation. We have been granted 82 U.S. patents (and have approximately 28 U.S. patents pending) relating to various processes and renewable resource technologies. All of our patents are internally developed. Our ability to draw upon internal resources from various disciplines related to the geothermal power sector, such as geological expertise relating to reservoir management, and equipment engineering relating to power units, allows us to be innovative in creating new technologies and technological solutions.

Limited Exposure to Fuel Price Risk. A geothermal power plant does not need to purchase fuel (such as coal, natural gas, or fuel oil) in order to generate electricity. Thus, once the geothermal reservoir has been identified and estimated to be sufficient for use in a geothermal power plant, the drilling of wells is complete and the plant has a PPA, the plant is not exposed to fuel price or fuel delivery risk apart from the impact fuel prices may have on the price at which we sell power under PPAs that are based on the relevant power purchaser s avoided costs.

Although we are confident in our competitive position in light of the strengths described above, we face various challenges in the course of our business operations, including as a result of the risks described in Item 1A Risk Factors below, the trends and uncertainties discussed in Trends and Uncertainties under Item 7 Management s Discussion and Analysis of Financial Condition and Results of Operations below, and the competition we face in our different business segments described under Competition below.

Business Strategy

Our strategy is to continue building a geographically balanced portfolio of geothermal and recovered energy assets, and to continue to be a leading manufacturer and provider of products and services related to renewable energy. We intend to implement this strategy through:

Development and Construction of New Geothermal Power Plants continuously seeking out commercially exploitable geothermal resources, developing and constructing new geothermal power plants and entering into long-term PPAs providing stable cash flows in jurisdictions where the regulatory, tax and business environments encourage or provide incentives for such development and which meet our investment criteria;

Development and Construction of Recovered Energy Power Plants establishing a first-to-market leadership position in recovered energy power plants in North America and building on that experience to expand into other markets worldwide;

Acquisition of New Assets acquiring from third parties additional geothermal and other renewable assets that meet our investment criteria;

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Manufacturing and Providing Products and Service Related to Renewable Energy designing, manufacturing and contracting power plants for our own use and selling to third parties power units and other generation equipment for geothermal and recovered energy-based electricity generation;

Increasing Output from Our Existing Power Plants increasing output from our existing geothermal power plants by adding additional generating capacity, upgrading plant technology, and improving geothermal reservoir operations, including improving methods of heat source supply and delivery; and

Technological Expertise investing in research and development of renewable energy technologies and leveraging our technological expertise to continuously improve power plant components, reduce operations and maintenance costs, develop competitive and environmentally friendly products for electricity generation and target new service opportunities.

Recent Developments

The most significant recent developments in our company and business are described below.

On January 28, 2013, we announced that our wholly owned subsidiary, Ormat Nevada, and JPM entered into a tax equity partnership transaction involving certain geothermal power plants in California and Nevada. As part of the transaction, Ormat Nevada transferred the plants into a new subsidiary, ORTP, and sold an interest in ORTP to JPM. In connection with the closing, JPM paid to Ormat Nevada approximately $35.7 million and will make additional payments to ORTP based on the value of PTCs generated by the portfolio over time that are expected to be made until December 31, 2016 and add up to approximately $8.7 million. See detailed description of the transaction under Item 7 Management Discussion and Analysis of Financial Condition and Results of Operations below.

On January 23, 2013, we announced that we will record an impairment charge to the North Brawley power plant located in Imperial County, California. We recorded an impairment charge to the North Brawley power plant in the fourth quarter of 2012, in an amount of $229.1 million. The North Brawley power plant was placed in service under its power purchase agreement with Southern California Edison in 2010 and since then has been operating at capacities between 20 MW and 33 MW. Due to recent developments, detailed under Description of Our Power Plants below, we have decided to operate the plant at the current capacity level of approximately 27 MW and refrain from additional capital investment to expand the capacity.

In November 2012, we entered into an agreement with Geotermica Platanares to acquire a late stage development geothermal project in Honduras. The project consists of the rights to a field where exploration work has been conducted in the past and a PPA for up to 35 MW with ENEE, the national utility of Honduras. Upon the fulfillment of certain conditions and the closing of the transaction, we will become the owner of all the project s assets, including wells, land, the PPA and the necessary permits to develop a geothermal project. Once the well field is fully appraised and the power plant is constructed, we will hold the assets under a BOT structure for approximately 15 years.

In November 2012, our indirect wholly owned subsidiary, OrPower 4, met the distribution requirements under a finance agreement signed in August 2012 with OPIC, an agency of the United States Governments, for limited-recourse project financing totaling up to $310 million for the Olkaria III geothermal power complex located in Naivasha, Kenya. The OPIC financing is described in detail under Item 7 Management Discussion and Analysis of Financial Condition and Results of Operations below.

In 2012, we entered into two new PPAs with PG&E under the RAM program in California (discussed below in Item 7 Management s Discussion and Analysis of Financial Condition and Results of Operations under the heading Trends and Uncertainties) to replace the existing SO#4 PPAs:

We signed a 20-year PPA that was approved by the CPUC, for the sale of up to 14 MW of energy to be produced from the G3 power plant in the Mammoth complex in California. Subject to final agreement with the current off-taker, Southern California Edison, we expect to start selling the electricity under the new PPA in April 2013.

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We signed a 20-year PPA for the sale of up to 7.5 MW of energy to be produced from the G1 power plant in the Mammoth complex in California. The PPA is subject to the approval of the CPUC and to final agreement with Southern California Edison. We expect to start selling the electricity under the new PPA at the end of 2013.

Since April 2012, we have entered into several derivatives transactions to reduce our exposure to fluctuations in the price of natural gas and oil under our PPAs with Southern California Edison and under the 25 MW PPA for the Puna complex. These transactions have not been designated as hedge transactions and are marked to market with the corresponding gains or losses recognized within electricity revenues.

In October 2012, we entered into NGI swap contracts for settlement effective from January 1, 2013 until December 31, 2013. The swap contracts have monthly settlements whereby the difference between the NGI and fixed price of $4.00 per MMbtu will be settled on a cash basis. Under the terms of these contracts, we will make floating rate payments to the bank and receive fixed rate payments from the bank on each settlement date. These swap contracts fix the energy rates under the SO#4 PPAs. The capacity payments under these PPAs remain fixed.

In September 2012, we entered into European put transactions with two banks for settlement effective from January 1, 2013 until December 31, 2013, pursuant to which we purchased NYMEX Heating Oil and ICE Brent put options. We entered into these transactions because both options had a high correlation with the avoided costs that HELCO uses to calculate the energy rate for the 25 MW PPA for the Puna complex. Under these transactions, we will receive on each settlement date the difference between the strike price and the respective monthly average market price of the relevant commodity. If the strike price is lower than the monthly average market price, no payment will be made. These transactions ensure a minimum on-peak energy rate and the capacity payments under these PPAs remain fixed.

In July 2012, we entered into a European put transaction with a bank for settlement effective from August 1, 2012, pursuant to which we purchased a natural gas put option for 0.7 million MMbtus that settled against NGI on December 31, 2012. We entered into this transaction in order to reduce our exposure to NGI below $3.19 per MMbtu under our SO#4 PPAs with Southern California Edison. The transaction was settled on December 31, 2012.

In May 2012, we entered into a European put transaction with a bank for settlement effective from July 1, 2012, pursuant to which we purchased a natural gas put option for 4.4 million MMbtus that settled against NGI on December 31, 2012. We entered into this transaction in order to reduce our exposure to NGI below $3.08 per MMbtu under our California SO#4 PPAs with Southern California Edison. The transaction was settled on December 31, 2012.

In April 2012, we entered into a NYMEX Heating Oil swap contract (85%) and an ICE Brent swap contract (15%) with a bank, each of which is effective from May 1, 2012 until March 31, 2013. We entered into these contracts because both swaps had a high correlation with the avoided costs that HELCO uses to calculate the energy rate for the 25 MW PPA for the Puna complex. Fuel prices in April 2012 were at historically high levels and we wanted to protect ourselves from a decrease in prices over the next twelve months. The contracts did not have up-front costs. Under the terms of these contracts, we will make floating rate payments to the bank and receive fixed rate payments from the bank on each settlement date. The swap contracts have monthly settlements whereby the difference between the fixed price and the monthly average price will be settled on a cash basis.

In the second and third quarters of 2012, we received approximately $119.2 million in cash grants from the U.S. Treasury under Section 1603 of the ARRA for specified energy property in lieu of tax credits relating to the enhancement of our Puna geothermal complex, and to our Jersey Valley, Tuscarora and McGinness Hills geothermal power plants.

In August 2012, NV Energy approved the commercial operation date of our 33 MW McGinness Hills power plant in Nevada and the full energy price under the PPA has been paid retroactive to July 1, 2012.

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In July 2012, our wholly owned subsidiary, Ormat Nevada, entered into a $61.4 million EPC contract with Enel Green Power. Under the terms of the EPC contract, we will provide two air-cooled Ormat Energy Converters at Enel Green Power s Cove Fort geothermal power plant project in southern Utah. Previously in April 2012, we entered into an interim agreement in the amount of $9.1 million to ensure timely completion of the project.

In May 2012, NV Energy approved the commercial operation date of our 18 MW Tuscarora power plant in Nevada and the full energy price under the PPA has been paid retroactive to January 1, 2012.

In May 2012, Bronicki Investments Ltd. (Bronicki Investments), a shareholder of Ormat Industries, completed the sale of part of its interest in Ormat Industries to FIMI ENRG Limited Partnership, a newly formed Israeli partnership, and FIMI ENRG, L.P., a newly formed Delaware partnership, both controlled by FIMI Opportunity IV (collectively, FIMI), whereby Bronicki Investments sold to FIMI approximately11.7% of the issued and outstanding shares of Ormat Industries. Following consummation of the transaction, each of Bronicki Investments and FIMI held 22.499% of the issued and outstanding shares of Ormat Industries, and the parties collectively owned 44.999% of the issued and outstanding shares of Ormat Industries. In addition, effective May 22, 2012, Gillon Beck, a senior partner in FIMI, was appointed as the Chairman of our Board of Directors; Ami Boehm, David Granot and Robert E. Joyal were appointed to our Board; and Lucien Y. Bronicki (our former Chairman), Roger W. Gale and David Wagener (former members of our Board) resigned from their respective positions on our Board of Directors.

Operations of our Electricity Segment

How We Own Our Power Plants. We customarily establish a separate subsidiary to own interests in each power plant. Our purpose in establishing a separate subsidiary for each plant is to ensure that the plant, and the revenues generated by it, will be the only source for repaying indebtedness, if any, incurred to finance the construction or the acquisition (or to refinance the acquisition) of the relevant plant. If we do not own all of the interest in a power plant, we enter into a shareholders agreement or a partnership agreement that governs the management of the specific subsidiary and our relationship with our partner in connection with the specific power plant. Our ability to transfer or sell our interest in certain power plants may be restricted by certain purchase options or rights of first refusal in favor of our power plant partners or the power plant s power purchasers and/or certain change of control and assignment restrictions in the underlying power plant and financing documents. All of our domestic geothermal and REG power plants, with the exception of the Puna complex, which is an Exempt Wholesale Generator, are Qualifying Facilities under the PURPA, and are eligible for regulatory exemptions from most provisions of the FPA and certain state laws and regulations.

How We Explore and Evaluate Geothermal Resources. Since 2006, we have expanded our exploration activities, particularly in the U.S. and recently also internationally. These activities generally involve:

Identifying and evaluating potential geothermal resources using information available to us from public and private resources as described under Initial Evaluation below.

Acquisition of land rights to any geothermal resources our initial evaluation indicates could potentially support a commercially viable power plant, taking into account various factors described under Land Acquisition below.

Conducting geophysical and geochemical surveys on some or all of the sites acquired, as described under Surveys below.

Obtaining permits to conduct exploratory drilling, as described under Environmental Permits below.

Drilling one or more exploratory wells on some or all of the sites to confirm and/or define the geothermal resource where indicated by our surveys and creating access roads to drilling locations and related activities, as described under Exploratory Drilling below.

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Drilling a full-size well (as described below) if our exploratory drilling indicates the geothermal resource can support a commercially viable power plant taking into account various factors described below under Exploratory Drilling . Drilling a full-size well is the point at which we usually consider a site moves from exploration to construction or development.

It normally takes us two to three years from the time we start active exploration of a particular geothermal resource to the time we have an operating production well, assuming we conclude the resource is commercially viable and determine to pursue its development.

Initial Evaluation. As part of our initial evaluation, we generally adhere to the following process, although our process can vary from site to site depending on the particular circumstances involved:

We evaluate historic, geologic and geothermal information available from public and private databases.

For some sites, we may obtain and evaluate additional information from other industry participants, such as where oil or gas wells may have been drilled on or near a site.

We generally create a digital, spatial geographic information systems database containing all pertinent information, including thermal water temperature gradients derived from historic drilling, geologic mapping information (e.g., formations, structure and topography), and any available archival information about the geophysical properties of the potential resource.

We assess other relevant information, such as infrastructure (e.g., roads and electric transmission lines), natural features (e.g., springs and lakes), and man-made features (e.g., old mines and wells).

Our initial evaluation is usually conducted by our own staff, although we might engage outside service providers for some tasks from time to time. The costs associated with an initial evaluation vary from site to site, based on various factors, including the acreage involved and the costs, if any, of obtaining information from private databases or other sources. On average, our expenses for an initial evaluation of a site range from approximately $20,000 to $100,000.

If we conclude, based on the information considered in the initial evaluation, that the geothermal resource can support a commercially viable power plant, taking into account various factors described below, we proceed to land rights acquisition.

Land Acquisition. For domestic power plants, we either lease or own the sites on which our power plants are located. For our foreign power plants, our lease rights for the plant site are generally contained in the terms of a concession agreement or other contract with the host government or an agency thereof. In certain cases, we also enter into one or more geothermal resource leases (or subleases) or a concession or other agreement granting us the exclusive right to extract geothermal resources from specified areas of land, with the owners (or sublessors) of such land. In some cases we obtain first the exploration license and once certain investment requirements are met, we can obtain the exploitation rights. This usually gives us the right to explore, develop, operate, and maintain the geothermal field, including, among other things, the right to drill wells (and if there are existing wells in the area, to alter them) and build pipelines for transmitting geothermal fluid. In certain cases, the holder of rights in the geothermal resource is a governmental entity and in other cases a private entity. Usually the duration of the lease (or sublease) and concession agreement corresponds to the duration of the relevant PPA, if any. In certain other cases, we own the land where the geothermal resource is located, in which case there are no restrictions on its utilization. Leasehold interests in federal land in the United States are regulated by the BLM and the Minerals Management Service. These agencies have rules governing the geothermal leasing process as discussed below under Description of Our Leases and Lands .

For most of our current exploration sites in the U.S., we acquire rights to use geothermal resource through land leases with the BLM, with various states, or through private leases. Under these leases, we typically pay an up-front non-refundable bonus payment, which is a component of the competitive lease process. In addition, we undertake to pay nominal, fixed annual rent payments for the period from the commencement of the lease

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through the completion of construction. Upon the commencement of power generation, we begin to pay to the lessors long-term royalty payments based on the use of the geothermal resources as defined in the respective agreements. These payments are contingent on the power plant s revenues. A summary of our typical lease terms is provided below under Description of our Leases and Lands .

The up-front bonus and royalty payments vary from site to site and are based, among other things, on current market conditions.

Surveys. Following the acquisition of land rights for a potential geothermal resource, we conduct surface water analyses and soil surveys to determine proximity to possible heat flow anomalies and up-flow/permeable zones and augment our digital database with the results of those analyses. We then initiate a suite of geophysical surveys (e.g., gravity, magnetics, resistivity, magnetotellurics, and spectral surveys) to assess surface and sub-surface structure (e.g., faults and fractures) and develop a roadmap of fluid-flow conduits and overall permeability. All pertinent geophysical data are then used to create three-dimensional geothermal reservoir models that are used to identify drill locations.

We make a further determination of the commercial viability of the geothermal resource based on the results of this process, particularly the results of the geochemical and geophysical surveys. If the results from the geochemical and geophysical surveys are poor (i.e., low derived resource temperatures or poor permeability), we will re-evaluate the commercial viability of the geothermal resource and may not proceed to exploratory drilling.

Exploratory Drilling. If we proceed to exploratory drilling, we generally will use outside contractors to create access roads to drilling sites. In the last two years we concentrated efforts to reduce exploration costs, and therefore, after obtaining drilling permits, we generally drill temperature gradient holes and/or core holes that are lower cost than slim holes (used in the past) using either our own drilling equipment or outside contractors. If the core hole is cold or does not support the assumed permeability, it may be capped and the area reclaimed if we conclude that the geothermal resource will not support a commercially viable power plant. If the obtained data supports a conclusion that the geothermal resource can support a commercially viable power plant, it will be used as an observation well to monitor and define the geothermal resource. However, to reduce construction risk we may also decide to drill a full-size well.

The costs we incur for exploratory drilling vary from site to site based on various factors, including the accessibility of the drill site, the geology of the site, and the depth of the resource, among other things. However, on average, exploration drilling costs, excluding drilling of a full-size well, are approximately $3.0 million for each site.

At various points during our exploration activities, we re-assess whether the geothermal resource involved will support a commercially viable power plant based on information available at that time. Among other things, we consider the following factors:

- New information obtained concerning the geothermal resource as our exploration activities proceed, and particularly the expected MW capacity power plant the resource can be expected to support.
- Current and expected market conditions and rates for contracted and merchant electric power in the market(s) to be serviced.
- Anticipated costs associated with further exploration activities.
- Anticipated costs for design and construction of a power plant at the site.
- Anticipated costs for operation of a power plant at the site, particularly taking into account the ability to share certain types of costs (such as control rooms) with one or more other power plants that are, or are expected to be, operating near the site.

If we conclude that the geothermal resource involved will support a commercially viable power plant, we proceed to constructing a power plant at the site.

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How We Construct Our Power Plants. The principal phases involved in constructing one of our geothermal power plants are as follows:

Drilling production wells.

Designing the well field, power plant, equipment, controls, and transmission facilities.

Obtaining any required permits.

Manufacturing (or in the case of equipment we do not manufacture ourselves, purchasing) the equipment required for the power plant.

Assembling and constructing the well field, power plant, transmission facilities, and related facilities.

It generally takes approximately two years from the time we drill a production well, until the power plant becomes operational.

Drilling Production Wells. We consider completing the drilling of first production well as the beginning of our construction phase for a power plant. However, it is not always sufficient for a full release for construction. The number of production wells varies from plant to plant depending, among other things, on the geothermal resource, the projected capacity of the power plant, the power generation equipment to be used and the way geothermal fluids will be re-injected to maintain the geothermal resource and surface conditions. The production wells are normally drilled by our own drilling equipment although in some cases we use outside contractors.

The cost for each production well varies depending, among other things, on the depth and size of the well and market conditions affecting the supply and demand for drilling equipment, labor and operators. Our average costs for each production well is approximately $4.0 million.

Design. We use our own employees to design the well field and the power plant, including equipment that we manufacture and that will be needed for the power plant. The designs vary based on various factors, including local laws, required permits, the geothermal resource, the expected capacity of the power plant and the way geothermal fluids will be re-injected to maintain the geothermal resource and surface conditions.

Permits. We use our own employees and outside consultants to obtain any required permits and licenses for our power plants that are not already covered by the terms of our site leases. The permits and licenses required vary from site to site, and are described below under Environmental Permits .

Manufacturing. Generally, we manufacture most of the power generating unit equipment we use at our power plants. Multiple sources of supply are generally available for all other equipment we do not manufacture.

Construction. We use our own employees to manage the construction work. For site grading, civil, mechanical, and electrical work we use subcontractors.

During the year ended December 31, 2012 we focused, in the Electricity Segment, on the construction of the McGinness Hills power plant, and the Wild Rose and Olkaria III Plant 2 projects in order to meet the respective completion deadlines. The uncertainty around future federal support and the temporary weakness in the PPA market in the western United States reduced the number of our projects that were moved to construction in 2012. During the year ended December 31, 2011, one site (Olkaria III Plant 2) moved to construction, and during the year ended December 31, 2010, two sites (CD4 at the Mammoth complex and Wild Rose) moved to construction.

We discontinued exploration activities at five sites in Nevada during the year ended December 31, 2012 and at one site in Nevada during the year ended December 31, 2010. Those sites were Leach Hot springs, Hyder Hot springs, Seven Devil, Smith Creek and Walker River in 2012 and Gabbs Valley in 2010. After conducting exploratory drilling in those sites, we concluded that the geothermal resource would not support commercial operations at this time. Costs associated with exploration activities at these sites were expensed accordingly. No exploration activities were discontinued in 2011 (see Write-off of Unsuccessful Exploration Activities under Item 7 Management Discussion and Analysis

of Financial Condition and Results of Operations).

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Five new sites were added to our exploration and development activities in the year ended December 31, 2012, compared with thirteen sites in the year ended December 31, 2011 and with seven sites in the year ended December 31, 2010.

How We Operate and Maintain Our Power Plants. In the U.S. we usually employ our subsidiary, Ormat Nevada, to act as operator of our power plants pursuant to the terms of an operation and maintenance agreement. Operation and maintenance of our foreign projects are generally provided by our subsidiary that owns the relevant project. Our operations and maintenance practices are designed to minimize operating costs without compromising safety or environmental standards while maximizing plant flexibility and maintaining high reliability. Our operations and maintenance practices for geothermal power plants seek to preserve the sustainable characteristics of the geothermal resources we use to produce electricity and maintain steady-state operations within the constraints of those resources reflected in our relevant geologic and hydrologic studies. Our approach to plant management emphasizes the operational autonomy of our individual plant or complex managers and staff to identify and resolve operations and maintenance issues at their respective power plants; however each power plant or complex draws upon our available collective resources and experience, and that of our subsidiaries. We have organized our operations such that inventories, maintenance, backup, and other operational functions are pooled within each power plant complex and provided by one operation and maintenance provider. This approach enables us to realize cost savings and enhances our ability to meet our power plant availability goals.

Safety is a key area of concern to us. We believe that the most efficient and profitable performance of our power plants can only be accomplished within a safe working environment for our employees. Our compensation and incentive program includes safety as a factor in evaluating our employees, and we have a well-developed reporting system to track safety and environmental incidents, if any, at our power plants.

How We Sell Electricity. In the U.S., the purchasers of power from our power plants are typically investor-owned electric utility companies. Outside of the United States, the purchaser is either a state-owned utility or a privately-owned entity and we typically operate our facilities pursuant to rights granted to us by a governmental agency pursuant to a concession agreement. In each case, we enter into long-term contracts (typically called PPAs) for the sale of electricity or the conversion of geothermal resources into electricity. Although a power plant s revenues under a PPA previously generally consisted of two payments energy payments and capacity payments, our recent PPAs provide for energy payments only. Energy payments are normally based on a power plant s electrical output actually delivered to the purchaser measured in kilowatt hours, with payment rates either fixed or indexed to the power purchaser s avoided power costs (i.e., the costs the power purchaser would have incurred itself had it produced the power it is purchasing from third parties) or rates that escalate at a predetermined percentage each year. Capacity payments are normally calculated based on the generating capacity or the declared capacity of a power plant available for delivery to the purchaser, regardless of the amount of electrical output actually produced or delivered. In addition, most of our domestic power plants located in California are eligible for capacity bonus payments under the respective PPAs upon reaching certain levels of generation.

How We Finance Our Power Plants. Historically we have funded our power plants with a combination of non-recourse or limited recourse debt, lease financing, parent company loans, and internally generated cash, which includes funds from operation, as well as proceeds from loans under corporate credit facilities, sale of securities, and other sources of liquidity. Such leveraged financing permits the development of power plants with a limited amount of equity contributions, but also increases the risk that a reduction in revenues could adversely affect a particular power plant s ability to meet its debt obligations. Leveraged financing also means that distributions of dividends or other distributions by plant subsidiaries to us are contingent on compliance with financial and other covenants contained in the financing documents.

Non-recourse debt or lease financing refers to debt or lease arrangements involving debt repayments or lease payments that are made solely from the power plant s revenues (rather than our revenues or revenues of any other power plant) and generally are secured by the power plant s physical assets, major contracts and

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agreements, cash accounts and, in many cases, our ownership interest in our affiliate that owns that power plant. These forms of financing are referred to as project financing . Project financing transactions generally are structured so that all revenues of a power plant are deposited directly with a bank or other financial institution acting as escrow or security deposit agent. These funds are then payable in a specified order of priority set forth in the financing documents to ensure that, to the extent available, they are used to first pay operating expenses, senior debt service (including lease payments) and taxes, and to fund reserve accounts. Thereafter, subject to satisfying debt service coverage ratios and certain other conditions, available funds may be disbursed for management fees or dividends or, where there are subordinated lenders, to the payment of subordinated debt service.

In the event of a foreclosure after a default, our affiliate that owns the power plant would only retain an interest in the assets, if any, remaining after all debts and obligations have been paid in full. In addition, incurrence of debt by a power plant may reduce the liquidity of our equity interest in that power plant because the interest is typically subject both to a pledge in favor of the power plant s lenders securing the power plant s debt and to transfer and change of control restrictions set forth in the relevant financing agreements.

Limited recourse debt refers to project financing as described above with the addition of our agreement to undertake limited financial support for our affiliate that owns the power plant in the form of certain limited obligations and contingent liabilities. These obligations and contingent liabilities may take the form of guarantees of certain specified obligations, indemnities, capital infusions and agreements to pay certain debt service deficiencies. To the extent we become liable under such guarantees and other agreements in respect of a particular power plant, distributions received by us from other power plants and other sources of cash available to us may be required to be used to satisfy these obligations. To the extent of these limited recourse obligations, creditors of a project financing of a particular power plant may have direct recourse to us.

We have also used financing structures to monetize PTCs and other favorable tax benefits derived from the financed power plants and an operating lease arrangement for one of our power plants.

How We Mitigate International Political Risk. We generally purchase insurance policies to cover our exposure to certain political risks involved in operating in developing countries, as described below under Insurance . To date, our political risk insurance contracts are with the Multilateral Investment Guaranty Agency (MIGA), a member of the World Bank Group, and Zurich Re, a private insurance and re-insurance company**.** Such insurance policies generally cover, subject to the limitations and restrictions contained therein, 80-90% of our revenue loss resulting from a specified governmental act such as confiscation, expropriation, riots, the inability to convert local currency into hard currency, and, in certain cases, the breach of agreements. We have obtained such insurance for all of our foreign power plants in operation.

Description of Our Leases and Lands

We have domestic leases on approximately 403,400 acres of federal, state, and private land in Alaska, California, Hawaii, Idaho, Nevada, New Mexico, Oregon and Utah. The approximate breakdown between federal, state, private leases and owned land is as follows:

76% are leases with the U.S. government, acting through the BLM;

13% are leases with private landowners and/or leaseholders;

9% are leases with various states, none of which is currently material; and

2% are owned by us.

Each of the leases within each of the categories has standard terms and requirements, as summarized below. Internationally, our land position includes approximately 366,300 acres, most of which are geothermal exploration licenses in six prospects in Chile.

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Bureau of Land Management (BLM) Geothermal Leases

Certain of our domestic project subsidiaries have entered into geothermal resources leases with the U.S. government, pursuant to which they have obtained the right to conduct their geothermal development and operations on federally-owned land. These leases are made pursuant to the Geothermal Steam Act and the lessor under such leases is the U.S. government, acting through the BLM.

BLM geothermal leases grant the geothermal lessee the right and privilege to drill for, extract, produce, remove, utilize, sell, and dispose of geothermal resources on certain lands, together with the right to build and maintain necessary improvements thereon. The actual ownership of the geothermal resources and other minerals beneath the land is retained in the federal mineral estate. The geothermal lease does not grant to the geothermal lessee the exclusive right to develop the lands, although the geothermal lessee does hold the exclusive right to develop geothermal resources within the lands. The geothermal lessee does not have the right to develop minerals unassociated with geothermal production and cannot prohibit others from developing the minerals present in the lands. The BLM may grant multiple leases for the same lands and, when this occurs, each lessee is under a duty to not unreasonably interfere with the development rights of the other. Because BLM leases do not grant to the geothermal lessee the exclusive right to use the surface of the land, BLM may grant rights to others for activities that do not unreasonably interfere with the geothermal lessee s uses of the same land; such other activities may include recreational use, off-road vehicles, and/or wind or solar energy developments.

Certain BLM leases issued before August 8, 2005 include covenants that require the projects to conduct their operations under the lease in a workmanlike manner and in accordance with all applicable laws and BLM directives and to take all mitigating actions required by the BLM to protect the surface of and the environment surrounding the land. Additionally, certain leases contain additional requirements, some of which concern the mitigation or avoidance of disturbance of any antiquities, cultural values or threatened or endangered plants or animals, the payment of royalties for timber, and the imposition of certain restrictions on residential development on the leased land.

BLM leases entered into after August 8, 2005 require the geothermal lessee to conduct operations in a manner that minimizes impacts to the land, air, water, to cultural, biological, visual, and other resources, and to other land uses or users. The BLM may require the geothermal lessee to perform special studies or inventories under guidelines prepared by the BLM. The BLM reserves the right to continue existing leases and to authorize future uses upon or in the leased lands, including the approval of easements or rights-of-way. Prior to disturbing the surface of the leased lands, the geothermal lessee must contact the BLM to be apprised of procedures to be followed and modifications or reclamation measures that may be necessary. Subject to BLM approval, geothermal lessees may enter into unit agreements to cooperatively develop a geothermal resource. The BLM reserves the right to specify rates of development and to require the geothermal lessee to commit to a communalization or unitization agreement if a common geothermal resource is at risk of being overdeveloped.

Typical BLM leases issued to geothermal lessees before August 8, 2005 have a primary term of ten years and will renew so long as geothermal resources are being produced or utilized in commercial quantities, but cannot exceed a period of forty years after the end of the primary term. If at the end of the forty-year period geothermal steam is still being produced or utilized in commercial quantities and the lands are not needed for other purposes, the geothermal lessee will have a preferential right to renew the lease for a second forty-year term, under terms and conditions as the BLM deems appropriate.

BLM leases issued after August 8, 2005 have a primary term of ten years. If the geothermal lessee does not reach commercial production within the primary term, the BLM may grant two five-year extensions if the geothermal lessee: (i) satisfies certain minimum annual work requirements prescribed by the BLM for that lease, or (ii) makes minimum annual payments. Additionally, if the geothermal lessee is drilling a well for the purposes of commercial production, the primary term (as it may have been extended) may be extended for five years and as long thereafter as steam is being produced and used in commercial quantities (meaning the geothermal lessee either begins producing geothermal resources in commercial quantities or has a well capable of producing

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geothermal resources in commercial quantities and is making diligent efforts to utilize the resource) for thirty-five years. If, at the end of the extended thirty-five year term, geothermal steam is still being produced or utilized in commercial quantities and the lands are not needed for other purposes, the geothermal lessee will have a preferential right to renew the lease for fifty-five years, under terms and conditions as the BLM deems appropriate.

For BLM leases issued before August 8, 2005, the geothermal lessee is required to pay an annual rental fee (on a per acre basis), which escalates according to a schedule described therein, until production of geothermal steam in commercial quantities has commenced. After such production has commenced, the geothermal lessee is required to pay royalties (on a monthly basis) on the amount or value of (i) steam, (ii) by-products derived from production, and (iii) commercially de-mineralized water sold or utilized by the project (or reasonably susceptible to such sale or use).

For BLM leases issued after August 8, 2005, (i) a geothermal lessee who has obtained a lease through a non-competitive bidding process will pay an annual rental fee equal to $1.00 per acre for the first ten years and $5.00 per acre each year thereafter; and (ii) a geothermal lessee who has obtained a lease through a competitive process will pay a rental equal to $2.00 per acre for the first year, $3.00 per acre for the second through tenth year and $5.00 per acre each year thereafter. Rental fees paid before the first day of the year for which the rental is owed will be credited towards royalty payments for that year. For BLM leases issued, effective, or pending on August 5, 2005 or thereafter, royalty rates are fixed between 1.0-2.5% of the gross proceeds from the sale of electricity during the first ten years of production under the lease. The royalty rate set by the BLM for geothermal resources produced for the commercial generation of electricity but not sold in an arm s length transaction is 1.75% for the first ten years of production and 3.5% thereafter. The royalty rate for geothermal resources sold by the geothermal lessee or an affiliate in an arm s length transaction is 10.0% of the gross proceeds from the arm s length sale. The BLM may readjust the rental or royalty rates at not less than twenty year intervals beginning thirty-five years after the date geothermal steam is produced.

In the event of a default under any BLM lease, or the failure to comply with any of the provisions of the Geothermal Steam Act or regulations issued under the Geothermal Steam Act or the terms or stipulations of the lease, the BLM may, 30 days after notice of default is provided to the relevant project, (i) suspend operations until the requested action is taken, or (ii) cancel the lease.

Private Geothermal Leases

Certain of our domestic project subsidiaries have entered into geothermal resources leases with private parties, pursuant to which they have obtained the right to conduct their geothermal development and operations on privately owned land. In many cases, the lessor under these private geothermal leases owns only the geothermal resource and not the surface of the land.

Typically, the leases grant our project subsidiaries the exclusive right and privilege to drill for, produce, extract, take and remove from the leased land water, brine, steam, steam power, minerals (other than oil), salts, chemicals, gases (other than gases associated with oil), and other products produced or extracted by such project subsidiary. The project subsidiaries are also granted certain non-exclusive rights pertaining to the construction and operation of plants, structures, and facilities on the leased land. Additionally, the project subsidiaries are granted the right to dispose of waste brine and other waste products as well as the right to re-inject into the leased land water, brine, steam, and gases in a well or wells for the purpose of maintaining or restoring pressure in the productive zones beneath the leased land or other land in the vicinity. Because the private geothermal leases do not grant to the lessee the exclusive right to use the surface of the land, the lessor reserves the right to conduct other activities on the leased land in a manner that does not unreasonably interfere with the geothermal lessee s uses of the same land, which other activities may include agricultural use (farming or grazing), recreational use and hunting, and/or wind or solar energy developments.

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The leases provide for a term consisting of a primary term in the range of five to 30 years, depending on the lease, and so long thereafter as lease products are being produced or the project subsidiary is engaged in drilling, extraction, processing, or reworking operations on the leased land.

As consideration under most of our project subsidiaries private leases, the project subsidiary must pay to the lessor a certain specified percentage of the value at the well (which is not attributable to the enhanced value of electricity generation), gross proceeds, or gross revenues of all lease products produced, saved, and sold on a monthly basis. In certain of our project subsidiaries private leases, royalties payable to the lessor by the project subsidiary are based on the gross revenues received by the lessee from the sale or use of the geothermal substances, either from electricity production or the value of the geothermal resource at the well .

In addition, pursuant to the leases, the project subsidiary typically agrees to commence drilling, extraction or processing operations on the leased land within the primary term, and to conduct such operations with reasonable diligence until lease products have been found, extracted and processed in quantities deemed paying quantities by the project subsidiary, or until further operations would, in such project subsidiary s judgment, be unprofitable or impracticable. The project subsidiary has the right at any time within the primary term to terminate the lease and surrender the relevant land. If the project subsidiary has not commenced any such operations on said land (or on the unit area, if the lease has been unitized), or terminated the lease within the primary term, the project subsidiary must pay to the lessor, in order to maintain its lease position, annually in advance, a rental fee until operations are commenced on the leased land.

If the project subsidiary fails to pay any installment of royalty or rental when due and if such default continues for a period of fifteen days specified in the lease, for example, after its receipt of written notice thereof from the lessor, then at the option of the lessor, the lease will terminate as to the portion or portions thereof as to which the project subsidiary is in default. If the project subsidiary defaults in the performance of any obligations under the lease, other than a payment default, and if, for a period of 90 days after written notice is given to it by the lessor of such default, the project subsidiary fails to commence and thereafter diligently and in good faith take remedial measures to remedy such default, the lessor may terminate the lease.

We do not regard any property that we lease as material unless and until we begin construction of a power plant on the property, that is, until we drill a production well on the property.

Exploration Concessions in Chile

We have been awarded six exploration concessions in Chile, under which we have the rights to start exploration work with an original term of two years. Prior to the last six months of the original term of each exploration concession, we can request its extension for an additional period of two years. According to applicable regulations, the extension of the exploration concession is subject to the receipt by the Ministry of Energy of evidence that at least 25% of the planned investments for the execution of the project, as reflected in the relevant proposal submitted during the tender process, has been invested. Following submission of the request, the Ministry of Energy has three months in which it may grant or deny the extension. As of the date of this report we have received an extension for one of the six concessions.

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Description of Our Power Plants

Domestic Power Plants

The following descriptions summarize certain industry metrics for our domestic power plants:

Brady Complex

Location	Churchill County, Nevada
Generating Capacity	20 MW
Number of Power Plants	Two (Brady and Desert Peak 2 power plants).
Technology	The Brady complex utilizes binary and flash systems. The complex uses air and water cooled systems.
Subsurface Improvements	12 production wells and six injection wells are connected to the plants through a gathering system.
Major Equipment	Three OEC units and three steam turbines along with the Balance of Plant equipment.
Age	The Brady power plant commenced commercial operations in 1992 and a new OEC unit was added in 2004. The Desert Peak 2 power plant commenced commercial operation in 2007.
Land and Mineral Rights	The Brady complex area is comprised mainly of BLM leases. The leases are held by production. The scheduled expiration dates for all of these leases are after the end of the expected useful life of the power plants. The complex s rights to use the geothermal and surface rights under the leases are subject to various conditions, as described in Description of Our Leases and Lands .
Access to Property	Direct access to public roads from the leased property and access across the leased property are provided under surface rights granted pursuant to the leases, and the Brady power plant holds right of ways from the BLM and from the private owner that allows access to and from the plant.
Resource Information	The resource temperature at Brady is 274 degrees Fahrenheit and at Desert Peak 2 is 370 degrees Fahrenheit.

The Brady and Desert Peak geothermal systems are located within the Hot Springs Mountains, approximately 60 miles northeast of Reno, Nevada, in northwestern Churchill County.

The dominant geological feature of the Brady area is a linear NNE-trending band of hot ground that extends for a distance of two miles.

The Desert Peak geothermal field is located within the Hot Springs Mountains, which form part of the western boundary of the Carson Sink. The structure is characterized by east-titled fault blocks and NNE-trending folds.

Geologic structure in the area is dominated by high-angle normal faults of varying displacement.

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Resource Cooling	Approximately four degrees Fahrenheit per year was observed at Brady during the past 15 years of production. The temperature decline at Desert Peak is less than one degree Fahrenheit per year.
Sources of Makeup Water	Condensed steam is used for makeup water.
Power Purchaser	Brady power plant Sierra Pacific Power Company. Desert Peak 2 power plant Nevada Power Company.
PPA Expiration Date	Brady power plant 2022. Desert Peak 2 power plant 2027.
Financing	OFC Senior Secured Notes and ORTP Transaction in the case of Brady, and OPC Transaction in the case of Desert Peak 2.

Heber Complex

Location	Heber, Imperial County, California
Generating Capacity	92 MW
Number of Power Plants	Five (Heber 1, Heber 2, Heber South, G-1 and G-2).
Technology	The Heber 1 plant utilizes dual flash and the Heber 2, Heber South, G-1 and G-2 plants utilize binary systems. The complex uses a water cooled system.
Subsurface Improvements	31 production wells and 34 injection wells connected to the plants through a gathering system.
Major Equipment	17 OEC units and one steam turbine with the Balance of Plant equipment.
Age	The Heber 1 plant commenced commercial operations in 1985 and the Heber 2 plant in 1993. The G-1 plant commenced commercial operation in 2006 and the G-2 plant in 2005. The Heber South plant commenced commercial operation in 2008.
Land and Mineral Rights	The total Heber area is comprised of mainly private leases. The leases are held by production. The scheduled expiration dates for all of these leases are after the end of the expected useful life of the power plants.

	The complex s rights to use the geothermal and surface rights under the leases are subject to various conditions, as described above in Description of Our Leases and Lands .
Access to Property	Direct access to public roads from the leased property and access across the leased property are provided under surface rights granted pursuant to the leases.
Resource Information	The resource supplying the flash flowing Heber 1 wells averages 348 degrees Fahrenheit. The resource supplying the pumped Heber 2 wells averages 318 degrees Fahrenheit.

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	Heber production is from deltaic sedimentary sandstones deposited in the subsiding Salton Trough of California s Imperial Valley. Produced fluids rise from near the magmatic heated basement rocks (18,000 feet) via fault/fracture zones to the near surface. Heber 1 wells produce directly from deep (4,000 to 8,000 feet) fracture zones. Heber 2 wells produce from the nearer surface (2,000 to 4,000 feet) matrix permeability sandstones in the horizontal outflow plume fed by the fractures from below and the surrounding ground waters.
	Scale deposition in the flashing Heber 1 producers is controlled by down- hole chemical inhibition supplemented with occasional mechanical cleanouts and acid treatments. There is no scale deposition in the Heber 2 production wells.
Resource Cooling	One degree Fahrenheit per year was observed during the past 20 years of production.
Sources of Makeup Water	Water is provided by condensate and by the IID.
Power Purchaser	Two PPAs with Southern California Edison and one PPA with SCPPA.
PPA Expiration Date	Heber 1 2015, Heber 2 2023, and Heber South 2031. The output from the G-1 and G-2 power plants is sold under the PPAs of Southern California Edison and SCPPA.
Financing	OrCal Senior Secured Notes and ORTP Transaction.
Supplemental Information	As a result of the transition to variable energy rates under the Heber 1 and Heber 2 PPAs and the significant decline in natural gas prices, we have experienced a substantial reduction in 2012 revenues. We expect that once the PPAs are replaced or expired we will be able to secure a rate higher than the current rate.
	We have revised our investment plans to optimize the operation of the complex rather than increasing the generating capacity. We plan to add additional wells and replace part of the old equipment with new equipment.

Jersey Valley Power Plant

Location	Pershing County, Nevada
Generating Capacity	12 MW (See supplemental information below)
Number of Power Plants	One
Technology	The Jersey Valley power plant utilizes an air cooled binary system.

Subsurface Improvements	Two production wells and four injection wells are connected to the plant through a gathering system. The third production well will be used in the future as required. Re-drilling of certain injection wells is currently under development.

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Major Equipment	Two OEC units together with the Balance of Plant equipment.
Age	Construction of the power plant was completed at the end of 2010 and the off-taker approved commercial operation status under the PPA effective on August 30, 2011.
Land and Mineral Rights	The Jersey Valley area is comprised of BLM leases. The leases are held by production. The scheduled expiration dates for all of these leases are after the end of the expected useful life of the power plant. The power plant s rights to use the geothermal and surface rights under the leases are subject to various conditions, as described above in Description of Our Leases and Lands .
Access to Property	Direct access to public roads from leased property and access across leased property under surface rights granted in leases from BLM.
Resource Information	The Jersey Valley geothermal reservoir consists of a small high-permeability area surrounded by a large low-permeability area. The high-permeability area has been defined by wells drilled along an interpreted fault trending west-northwest. Static water levels are artesian; two of the wells along the permeable zone have very high productivities, as indicated by Permeability Index (PI) values exceeding 20 gpm/psi. The average temperature of the resource is 330 degrees Fahrenheit.
Resource Cooling	Will be established in the future.
Power Purchaser	Nevada Power Company.
PPA Expiration Date	2032
Financing	Corporate funds and ITC cash grant from the U.S. Treasury. Once the Jersey Valley power plant reaches certain operational targets and meets other conditions precedent we have the ability to borrow additional funds under the OFC 2 Senior Secured Notes.
Supplemental Information	The Jersey Valley power plant is currently operating at 7 MW, below its designed capacity. This is primarily due to the need to shut down one of the injection wells that was rendered unusable by old mining wells that we believe were not adequately plugged when abandoned by the mining operator that previously operated on the land. We plan to improve injection capacity. We conducted an impairment test and no impairment is required.

Mammoth Complex

Location	Mammoth Lakes, California
Generating Capacity	29 MW
Number of Power Plants	Three (G-1, G-2, and G-3).

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Technology	The Mammoth complex utilizes air cooled binary systems.
Subsurface Improvements	Eleven production wells and five injection wells connected to the plants through a gathering system.
Major Equipment	Eight Rotoflow expanders together with the Balance of Plant equipment.
Age	The G-1 plant commenced commercial operations in 1984 and G-2 and G-3 commenced commercial operation in 1990.
Land and Mineral Rights	The total Mammoth area is comprised mainly of BLM leases. The leases are held by production. The scheduled expiration dates for all of these leases are after the end of the expected useful life of the power plants. The complex s rights to use the geothermal and surface rights under the leases are subject to various conditions, as described above in Description of Our Leases and Lands . We purchased land at Mammoth that was owned by a third party. This purchase will reduce royalty expenses for the Mammoth complex.
Access to Property	Direct access to public roads from the leased property and access across the leased property are provided under surface rights granted pursuant to the leases.
Resource Information	The average resource temperature is 339 degrees Fahrenheit. The Casa Diablo/Basalt Canyon geothermal field at Mammoth lies on the southwest edge of the resurgent dome within the Long Valley Caldera. It is believed that the present heat source for the geothermal system is an active magma body underlying the Mammoth Mountain to the northwest of the field. Geothermal waters heated by the magma flow from a deep source (greater than 3,500 feet) along faults and fracture zones from northwest to southeast east into the field area. The produced fluid has no scaling potential.
Resource Cooling	In the last year the temperature was stabilized and there is no notable decline, although one degree Fahrenheit per year was observed during the prior 20 years of production.
Power Purchaser	Southern California Edison.

PPA Expiration Date	G-1 2014, G-2 and G-3 2020.
Financing	OFC Senior Secured Notes and ORTP Transaction.
Supplemental Information	As a result of the transition to variable energy rates under the Mammoth complex PPAs and the significant decline in natural gas prices, we have experienced a substantial reduction in 2012 revenues. In 2012, we entered into two new PPAs with PG&E, which will

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	replace the current G-1 (in April 2013) and G-3 PPAs (at the end of 2013) with Southern California Edison. Once effective, the new PPAs will partially minimize the reduction in revenues.
	We have revised our investment plans to optimize the operation of the complex rather than increasing the generating capacity. We plan to replace part of the old units in the Mammoth complex (G-1 and G-3) with new Ormat-manufactured equipment. We recently started the manufacturing of the equipment.
McGinness Hills Power Plant	
Location	Lander County, Nevada
Generating Capacity	33 MW
Number of Power Plants	One
Technology	The McGinness Hills power plant utilizes an air cooled binary system.
Subsurface Improvements	Five production wells and three injection wells are connected to the power plant.
Material Equipment	Two air cooled OEC units with the Balance of Plant Equipment.
Age	The power plant commenced commercial operation on July 1, 2012,
Land and Mineral Rights	The McGinness Hills area is comprised of private and BLM leases.
	The leases are currently held by the payment of annual rental payments, as described above in Description of Our Leases and Lands .
	The rights to use the geothermal and surface rights under the leases are subject to various conditions, as described above in Description of Our Leases and Lands .
Resource Information	The McGinness geothermal reservoir is contained within a network of fractured rocks over an area at least three square miles. The reservoir is contained in both Tertiary intrusive and Paleozoic sedimentary (basement) rocks. The thermal fluids within the reservoir are inferred to flow upward through the basement rocks along the NNE-striking faults at several fault intersections. The thermal fluids then generally outflow laterally to the NNE and SSW along the NNE-striking faults. No modern thermal manifestations exist at McGinness, although hot spring deposits encompass an area of approximately 0.25 square miles and indicate a history of surface thermal fluid flow. The resource

temperature averages 337 degrees Fahrenheit and the fluids are sourced from the reservoir at elevations between 2,000 to 5,000 feet below the surface.

The average temperature of the resource is approximately 335 degrees Fahrenheit.

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Resource Cooling	Will be established in the future.
Access to Property	Direct access to public roads from the leased property and access across the leased property are provided under surface rights granted in leases from BLM.
Power Purchaser	Nevada Power Company
PPA Expiration Date	2033
Financing	OFC 2 Senior Secured Notes and ITC cash grant from the U.S. Treasury.

North Brawley Power Plant

Location	Imperial County, California
Generating Capacity	27 MW (See supplemental information below)
Number of Power Plants	One
Technology	The North Brawley power plant utilizes a water- cooled binary system.
Subsurface Improvements	17 production wells and 21 injection wells are currently connected to the plant through a gathering system. An additional injection well was drilled and it is currently being evaluated.
Major Equipment	Five OEC units together with the Balance of Plant equipment.
Age	The power plant was placed in service on January 15, 2010 with commercial operation having commenced on March 31, 2011.
Land and Mineral Rights	The total North Brawley area is comprised of private leases. The leases are held by production. The scheduled expiration date for all of these leases is after the end of the expected useful life of the power plant. The plant s rights to use the geothermal and surface rights under the leases are subject to various conditions, as described above in Description of Our Leases and Lands .

Access to Property

	Direct access to public roads from the leased property and access across the leased property are provided under surface rights granted pursuant to the leases.
Resource Information	North Brawley production is from deltaic and marine sedimentary sands and sandstones deposited in the subsiding Salton Trough of the Imperial Valley. Based on seismic refraction surveys the total thickness of these sediments in the Brawley area is over 15,000 feet. The shallow production reservoir (1,500 4,500 feet) that was developed is fed by fractures and matrix permeability and is conductively heated from the underlying fractured reservoir which convectively circulates magmatically heated fluid. Produced fluid

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	salinity ranges from 20,000 to 50,000 ppm, and the moderate scaling and corrosion potential is chemically inhibited. The temperature of the deeper fractured reservoir fluids exceed 525 degrees Fahrenheit, but the fluid is not yet developed because of severe scaling and corrosion potential. The deep reservoir is not dedicated to the North Brawley power plant. The average produced fluid resource temperature is 335 degrees Fahrenheit.
Resource Cooling	Will be established in the future.
Sources of Makeup Water	Water is provided by the IID.
Power Purchaser	Southern California Edison
PPA Expiration Date	2031
Financing	Corporate funds and ITC cash grant from the U.S. Treasury.
Supplemental Information	Since the North Brawley power plant was placed in service, in 2010, it has been much more difficult to operate its geothermal field than other fields and the power plant has been unable to reach its design capacity of 50 MW. Instead, it has been operating at capacities between 20 MW and 33 MW. This generation level has been achieved following significant additional capital expenditures and higher than anticipated operating costs. We plan to continue to sell the generated power from the North Brawley plant to Southern California Edison under the existing PPA and at the current capacity level of approximately 27 MW and refrain from additional capital investment to expand the capacity. As noted above, during the fourth quarter of 2012 we recognized an impairment charge of $229.1 million for this plant.

OREG 1 Power Plant

Location	Four gas compressor stations along the Northern Border natural gas pipeline in North and South Dakota.
Generating Capacity	22 MW
Number of Units	Four

Technology	The OREG 1 power plant utilizes our air cooled OEC units.
Major Equipment	Four WHOH and four OEC units together with the Balance of Plant equipment.
Age	The OREG 1 power plant commenced commercial operations in 2006.
Land	Easement from NBPL.

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Access to Property	Direct access to the plant from public roads.
Power Purchaser	Basin Electric Power Cooperative.
PPA Expiration Date	2031
Financing	Corporate funds.

OREG 2 Power Plant

Location	Four gas compressor stations along the Northern Border natural gas pipeline; one in Montana, two in North Dakota, and one in Minnesota.
Generating Capacity	22 MW
Number of Units	Four
Technology	The OREG 2 power plant utilizes our air cooled OEC units.
Major Equipment	Four WHOH and four OEC units together with the Balance of Plant equipment.
Age	The OREG 2 power plant commenced commercial operations during 2009.
Land	Easement from NBPL.
Access to Property	Direct access to the plant from public roads.
Power Purchaser	Basin Electric Power Cooperative.
PPA Expiration Date	2034
Financing	Corporate funds.

OREG 3 Power Plant

Location

	A gas compressor station along Northern Border natural gas pipeline in Martin County, Minnesota.
Generating Capacity	5.5 MW
Number of Units	One
Technology	The OREG 3 power plant utilizes our air cooled OEC units.
Major Equipment	One WHOH and one OEC unit along with the Balance of Plant equipment.
Age	The OREG 3 power plant commenced commercial operations during 2010.
Land	Easement from NBPL.

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Access to Property	Direct access to the plant from public roads.
Power Purchaser	Great River Energy.
PPA Expiration Date	2029
Financing	Corporate funds.

OREG 4 Power Plant

Location	A gas compressor station along natural gas pipeline in Denver, Colorado.
Generating Capacity	3.5 MW
Number of Units	One
Technology	The OREG 4 power plant utilizes our air cooled OEC units.
Major Equipment	Two WHOH and one OEC unit together with the Balance of Plant Equipment.
Age	The OREG 4 power plant commenced commercial operations during 2009.
Land	Easement from Trailblazer Pipeline Company.
Access to Property	Direct access to the plant from public roads.
Power Purchaser	Highline Electric Association
PPA Expiration Date	2029
Financing	Corporate funds.
Supplemental Information	The OREG 4 power plant was tested for impairment in the third quarter of 2012 due to continued low run time of the compressor station that serves as its heat source, which resulted in low power generation and revenue.

	As a result, during the third quarter of 2012 we recognized an impairment charge of $7.3 million for this plant.

Ormesa Complex

Location	East Mesa, Imperial County, California
Generating Capacity	54 MW
Number of Power Plants	Four (OG I, OG II, GEM 2 and GEM 3)
Technology	The OG plants utilize a binary system and the GEM plants utilize a flash system. The complex uses a water cooling system.

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Subsurface Improvements	32 production wells and 52 injection wells connected to the plants through a gathering system.
Material Major Equipment	32 OEC units and two steam turbines with the Balance of Plant equipment.
Age	The various OG I units commenced commercial operations between 1987 and 1989, and the OG II plant commenced commercial operation in 1988. Between 2005 and 2007 a significant portion of the old equipment in the OG plants was replaced (including turbines through repowering). The GEM plants commenced commercial operation in 1989, and a new bottoming unit was added in 2007.
Land and Mineral Rights	The total Ormesa area is comprised of BLM leases. The leases are held by production. The scheduled expiration dates for all of these leases are after the end of the expected useful life of the power plants. The complex s rights to use the geothermal and surface rights under the leases are subject to various conditions, as described above in Description of Our Leases and Lands .
Access to Property	Direct access to public roads from the leased property and access across the leased property are provided under surface rights granted pursuant to the leases.
Resource Information	The resource temperature is an average of 306 degrees Fahrenheit. Production is from sandstones. Productive sandstones are between 1,800 and 6,000 feet, and have only matrix permeability. The currently developed thermal anomaly was created in geologic time by conductive heating and direct outflow from an underlying convective fracture system. Produced fluid salinity ranges from 2,000 ppm to 13,000 ppm, and minor scaling and corrosion potential is chemically inhibited.
Resource Cooling	One degree Fahrenheit per year was observed during the past 20 years of production.
Sources of Makeup Water	Water is provided by the IID.
Power Purchaser	Southern California Edison under a single PPA.
PPA Expiration Date	2018
Financing	OFC Senior Secured Notes and ORTP Transaction.

Supplemental Information	As a result of the transition to variable energy rates under the Ormesa PPA and the significant decline in natural gas prices, we have experienced a substantial reduction in 2012 revenues. We expect that once the PPAs are replaced or expired we will be able to secure a rate higher than the current rate.

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Puna Complex

Location	Puna district, Big Island, Hawaii
Generating Capacity	38 MW
Number of Power Plants	Two
Technology	The Puna plants utilize our geothermal combined cycle and binary systems. The plants use an air cooled system.
Subsurface Improvements	Five production wells and four injection wells connected to the plants through a gathering system. We drilled a sixth production well, which is currently under evaluation.
Major Equipment	One plant consists of ten OEC units made up of ten binary turbines, ten steam turbines and two bottoming units along with the Balance of Plant equipment. The second plant consists of two OEC units along with Balance of Plant equipment.
Age	The first plant commenced commercial operations in 1993. The second plant was placed in service in 2011.
Land and Mineral Rights	The Puna area is comprised of a private lease. The private lease is between PGV and KLP and it expires in 2046. PGV pays annual rental payment to KLP, which is adjusted every five years based on the CPI. The state of Hawaii owns all mineral rights (including geothermal resources) in the state. The state has issued a Geothermal Resources Mining Lease to KLP, and KLP in turn has entered into a sublease agreement with PGV, with the state s consent. Under this arrangement, the state receives royalties of approximately 3% of the gross revenues.
Access to Property	Direct access to the leased property is readily available via county public roads located adjacent to the leased property. The public roads are at the north and south boundaries of the leased property.
Resource Information	The geothermal reservoir at Puna is located in volcanic rock along the axis of the Kilauea Lower East Rift Zone. Permeability and productivity are controlled by rift-parallel subsurface fissures created by volcanic activity. They may also be influenced by lens-shaped bodies of pillow basalt which have been postulated to exist along the axis of the rift at depths below 7,000 feet.

	The distribution of reservoir temperatures is strongly influenced by the configuration of subsurface fissures and temperatures are among the hottest of any geothermal field in the world, with maximum measured temperatures consistently above 650 degrees Fahrenheit.
Resource Cooling	The resource temperature is stable.

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Power Purchaser	Three PPAs with HELCO (see Supplemental Information below).
PPA Expiration Date	2027
Financing	Operating Lease and ITC cash grant from the U.S. Treasury.
Supplemental Information	The pricing for the energy that is sold from the Puna complex is as follows: For the first on-peak 25 MW, the energy price has not changed from HELCO avoided cost. For the next on-peak 5 MW, the price has changed from a diesel-based price to a flat rate of 11.8 cents per kWh escalated by 1.5% per year. For the new on-peak 8 MW, the price is 9 cents per kWh for up to 30,000 MWh/year and 6 cents per kWh above 30,000 MWh/year, escalated by 1.5% per year. For the first off-peak 22 MW the energy price has not changed from avoided cost. The off-peak energy above 22 MW is dispatchable: For the first off-peak 5 MW, the price has changed from diesel-based price to a flat rate of 11.8 cents per kWh escalated by 1.5% per year. For the energy above 27 MW (up to 38 MW) the price is 6 cents per kWh, escalated by 1.5% per year. The capacity payment for the first 30 MW remains the same ($160 kW/year for the first 25 MW and $100.95 kW/year for the additional 5 MW). For the new 8 MW power plant the annual capacity payment is $2 million.

Steamboat Complex

Location	Steamboat, Washoe County, Nevada
Generating Capacity	83 MW
Number of Power Plants	

	Seven (Steamboat 1A, Steamboat 2 and 3, Burdette (Galena 1), Steamboat Hills, Galena 2 and Galena 3).
Technology	The Steamboat complex utilizes a binary system (except for Steamboat Hills, which utilizes a single flash system). The complex uses air and water cooling systems.
Subsurface Improvements	23 production wells and eight injection wells connected to the plants through a gathering system.
Major Equipment	12 individual air cooled OEC units and one steam turbine together with the Balance of Plant Equipment.

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Age	The Steamboat 1A plant commenced commercial operation in 1988 and the other plants commenced commercial operation in 1992, 2005, 2007 and 2008. During 2008, the Rotoflow expanders at Steamboat 2 and 3 were replaced with four turbines manufactured by us and we repowered Steamboat 1A.
Land and Mineral Rights	The total Steamboat area is comprised of 41% private leases, 41% BLM leases and 18% private land owned by us. The leases are held by production. The scheduled expiration dates for all of these leases are after the end of the expected useful life of the power plants.
	The complex s rights to use the geothermal and surface rights under the leases are subject to various conditions, as described above in Description of Our Leases and Lands .
	We have easements for the transmission lines we use to deliver power to our power purchasers.
Resource Information	The resource temperature is an average of 290 degrees Fahrenheit.
	The Steamboat geothermal field is a typical basin and range geothermal reservoir. Large and deep faults that occur in the rocks allow circulation of ground water to depths exceeding 10,000 feet below the surface. Horizontal zones of permeability permit the hot water to flow eastward in an out-flow plume.
	The Steamboat Hills and Galena 2 power plants produce hot water from fractures associated with normal faults. The rest of the power plants acquire their geothermal water from the horizontal out-flow plume.
	The water in the Steamboat reservoir has a low total solids concentration. Scaling potential is very low unless the fluid is allowed to flash which will result in calcium carbonate scale. Injection of cooled water for reservoir pressure maintenance prevents flashing.
Resource Cooling	In the last year the temperature dropped by three degrees Fahrenheit, slightly more than the two degrees per year observed during the prior 20 years of production.
Access to Property	Direct access to public roads from the leased property and access across the leased property are provided under surface rights granted pursuant to the leases.
Sources of Makeup Water	Water is provided by condensate and the local utility.
Power Purchaser	Sierra Pacific Power Company (for Steamboat 1A, Steamboat 2 and 3, Burdette (Galena1), Steamboat Hills, and Galena 3) and Nevada Power Company (for Galena 2).

PPA Expiration Date	Steamboat 1A 2018, Steamboat 2 and 3 2022, Burdette (Galena1) 2026, Steamboat Hills 2018, Galena 3 2028, and Galena 2 2027.

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Financing	OFC Senior Secured Notes and ORTP Transaction (Steamboat 1A, Steamboat 2 and 3, and Burdette (Galena1)) and OPC Transaction (Steamboat Hills, Galena 2, and Galena 3)
Tuscarora Power Plant	
Location	Elko County, Nevada
Projected Generating Capacity	18 MW
Number of Power Plants	One
Technology	The Tuscarora power plant utilizes a water cooled binary system.
Subsurface Improvements	Four production and five injection wells are connected to the power plant.
Major Equipment	Two water cooled OEC units with the Balance of Plant equipment.
Age	The power plant commenced commercial operation on January 11, 2012.
Land and Mineral Rights	The Tuscarora area is comprised of private and BLM leases.
	The leases are currently held by payment of annual rental payments, as described above in Description of Our Leases and Lands .
	The plant s rights to use the geothermal and surface rights under the leases are subject to various conditions, as described above in Description of Our Leases and Lands .
Resource Information	The Tuscarora geothermal reservoir consists of an area of approximately 2.5 square miles. The reservoir is contained in both tertiary and paleozoic (basement) rocks. The paleozoic section consists primarily of sedimentary rocks, overlain by tertiary volcanic rocks. Thermal fluid in the native state of the reservoir flows upward and to the north through apparently southward-dipping, basement formations. At an elevation of roughly 2,500 feet with respect to mean sea level, the upwelling thermal fluid enters the tertiary volcanic rocks and flows directly upward, exiting to the surface at Hot Sulphur Springs.
	The resource temperature averages 346 degrees Fahrenheit.
Resource Cooling	Will be established in the future.

Access to Property	Direct access to public roads from the leased property and access across the leased property are provided under surface rights granted in leases from BLM.
Sources of Makeup Water	Water is provided from five water makeup wells.
Power Purchaser	Nevada Power Company

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PPA Expiration Date	2032
Financing	OFC 2 Senior Secured Notes and ITC cash grant from the U.S. Treasury.

Foreign Power Plants

The following descriptions summarize certain industry metrics for our foreign power plants:

Amatitlan Power Plant (Guatemala)

Location	Amatitlan, Guatemala
Generating Capacity	18 MW
Number of Power Plants	One
Technology	The Amatitlan power plant utilizes an air cooled binary system and a small back pressure steam turbine (1 MW).
Subsurface Improvements	Five production wells and two injection wells connected to the plants through a gathering system.
Major Equipment	One steam turbine and two OEC units together with the Balance of Plant equipment.
Age	The plant commenced commercial operation in 2007.
Land and Mineral Rights	Total resource concession area (under usufruct agreement with INDE) is for a term of 25 years from April 2003. Leased and company owned property is approximately 3% of the concession area. Under the agreement with INDE, the power plant company pays royalties of 3.5% of revenues up to 20.5 MW and 2% of revenues exceeding 20.5 MW. The generated electricity is sold at the plant fence. The transmission line is owned by INDE.
Resource Information	The resource temperature is an average of 528 degrees Fahrenheit. The Amatitlan geothermal area is located on the north side of the Pacaya Volcano at approximately 5,900 feet above sea level.

	Hot fluid circulates up from a heat source beneath the volcano, through deep faults to shallower depths, and then cools as it flows horizontally to the north and northwest to hot springs on the southern shore of Lake Amatitlan and the Michatoya River Valley.
Resource Cooling	Approximately two degrees Fahrenheit per year.
Access to Property	Direct access to public roads from the leased property and access across the leased property are provided under surface rights granted pursuant to the lease agreement.
Power Purchasers	INDE and another local purchaser.

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PPA Expiration Date	The PPA with INDE expires in 2028.
Financing	Senior secured project loan from TCW Global Project Fund II, Ltd.
Supplemental Information	The power plant was registered by the United Nations Framework Convention on Climate Change as a Clean Development Mechanism. It is expected to offset emissions of approximately 83,000 tons of CO_2 per year. The power plant had a contract to sell all of its emission reduction credits through the end of 2012 to a European buyer.

Momotombo Power Plant (Nicaragua)

Location	Momotombo, Nicaragua
Generating Capacity	22 MW
Number of Power Plants	One
Technology	The Momotombo power plant utilizes single flash and binary systems. The plant uses air and water cooled systems.
Subsurface Improvements	Ten production wells and seven injection wells connected to the plants through a gathering system.
Major Equipment	One steam turbine and one OEC unit together with the Balance of Plant equipment.
Age	The plant commenced commercial operation in 1983 and we signed the concession agreement in 1999.
Land and Mineral Rights	The total Momotombo area is under a concession agreement which expires in mid-2014.
	We sell the generated electricity at the boundary of the plant. The transmission line is owned by the utility.
Resource Information	The resource temperature is an average of 463 degrees Fahrenheit.
	The Momotombo geothermal reservoir is located within sedimentary and andesitic volcanic formations that relate to the Momotombo volcano.

	Main flow paths in the geothermal system are a hot reservoir layer. The shallow layer conducted deep fluids that eventually will be discharged at surface at the eastern edge of the geothermal system at the shore of the Lake Managua.
Resource Cooling	Approximately 3.5 degrees Fahrenheit per year was observed during the past ten years of production.
Access to Property	Direct access to public roads and access across the property are provided under surface rights granted pursuant to the concession assignment agreement.
Sources of Makeup Water	Condensed steam is used for makeup water.

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Power Purchaser	DISNORTE and DISSUR
PPA Expiration Date	2014
Financing	A loan from Bank Hapoalim B.M, which was repaid in full in 2010.
Olkaria III Complex (Kenya)	
Location	Naivasha, Kenya
Generating Capacity	52 MW
Number of Power Plants	Two (Olkaria III Phase 1 and Olkaria III Phase 2, together Plant 1).
Technology	The Olkaria III complex utilizes an air cooled binary system.
Subsurface Improvements	Ten production wells and three injection wells connected to the plants through a gathering system.
Major Equipment	Six OEC units together with the Balance of Plant equipment.
Age	Phase 2 commenced commercial operation in January 2009 and was incorporated into Plant 1, which commenced operation in 2000.
Land and Mineral Rights	The total Olkaria III area is comprised of government leases. A license granted by the Kenyan government provides exclusive rights of use and possession of the relevant geothermal resources for an initial period of 30 years, expiring in 2029, which initial period may be extended for two additional five-year terms. The Kenyan Minister of Energy has the right to terminate or revoke the license in the event work in or under the license area stops during a period of six months, or there is a failure to comply with the terms of the license or the provisions of the law relating to geothermal resources. Royalties are paid to the Kenyan government monthly based on the amount of power supplied to the power purchaser and an annual rent. The power generated is purchased at the metering point located immediately after the power transformers in the 220 kV sub-station within the power plant, before the transmission lines which belong to the utility.
Resource Information	The resource temperature is an average of 570 degrees Fahrenheit.

	The Olkaria III geothermal field is on the west side of the greater Olkaria geothermal area located at approximately 6,890 feet above sea level within the Rift Valley.
	Hot geothermal fluids rise up from deep in the northeastern portion of the concession area, penetrating a low permeability zone below 3,280 feet above sea level to a high productivity, two-phase zone identified between 3,280 and 4,270 feet ASL.
Resource Cooling	The resource temperature is stable**.**

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Access to Property	Direct access to public roads from the leased property and access across the leased property are provided under surface rights granted pursuant to the lease agreement.
Power Purchaser	KPLC
PPA Expiration Date	2029
Financing	Senior secured project finance loan from OPIC and a subordinated loan from DEG.
Supplemental Information	See Projects under Construction Olkaria III Plant 2 and 3 (Kenya) .
	Upon the completion of Plant 2 the expiration date of the PPA will be extended until 2033.

Zunil Power Plant (Guatemala)

Location	Zunil, Guatemala
Generating Capacity	24 MW
Number of Power Plants	One
Technology	The Zunil power plant utilizes an air cooled binary system.
Major Equipment	Seven OEC units together with the Balance of Plant equipment.
Age	The plant commenced commercial operation in 1999.
Land and Mineral Rights	The land owned by the plant includes the power plant, workshop and open yards for equipment and pipes storage.
	Pipelines for the gathering system transit through a local agricultural area s right of way acquired by us.
	The geothermal wells and resource are owned by INDE.

	Our produced power is sold at our property line; power transmission lines are owned and operated by INDE.
Resource Information	The geothermal wells and resource are owned by INDE and are not under our responsibility.
Access to Property	Direct access to public roads.
Power Purchaser	INDE
PPA Expiration Date	2019
Financing	Senior Secured project loan from IFC and CDC that was repaid in full in November 2011.

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Supplemental Information	Through August 2011, the energy output of the power plant was sold under a take or pay arrangement, under which the revenues were calculated based on 24 MW capacity regardless of the actual performance of the power plant. From September 2011, the energy portion of revenues is paid based on the actual generation of the power plant, while the capacity portion remains the same. The actual generation of the power plant is based on a capacity of approximately 13 MW. In 2012, the energy revenues were approximately 17% of the total revenues of the power plant**.**

Projects under Construction

We are in varying stages of construction or enhancement of domestic and foreign projects, some of them are fully released for construction and two projects are each in an initial stage of construction.

The following is a description of projects in California, Nevada and Kenya with a total generating capacity of 78 MW that are fully released for construction with 62 MW expected to be completed by the end of 2013 and the rest expected to be completed in 2014**.**

Heber Solar PV Project (U.S.)

Location	Imperial County, California
Projected Generating Capacity	10 MW (24,500 MWh per year)
Projected Technology	Solar PV.
Condition	Under development.
Land	The Heber Solar area is comprised of land that we own.
Access to Property	Direct access to public roads from the leased property and access across the leased property.
Power Purchaser	The IID
PPA Expiration Date	20 years after date of COD.
Financing	Corporate funds.
Projected Operation	2013
Supplemental Information	Commercial operation is expected in 2013, subject to timely completion of the interconnection that is to be provided by the IID.

Olkaria III Plant 2&3 (Kenya)

Location	Naivasha, Kenya
Projected Generating Capacity	Plant 2 36 MW and Plant 3 16MW
Technology	Plants 2 and 3 of the Olkaria III complex will utilize an air cooled binary system.

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Condition	Field development of Plant 2 is in its final stage and site construction is close to completion. Plant 3 is in early stage of field development.
Subsurface Improvement	Seven production wells have been drilled.
Land and Mineral Rights	The total Olkaria III area is comprised of government leases. See description above under Olkaria III Complex .
Resource Information	The Olkaria III geothermal field is on the west side of the greater Olkaria geothermal area located within the Rift Valley at approximately 6,890 feet above sea level. Hot geothermal fluids rise up from deep in the northeastern portion of the concession area through low permeability at a shallow depth to a high productivity two-phase region from 3,280 to 4,270 feet above sea level. The expected average temperature of the resource cannot be estimated as field development has not been completed yet.
Access to Property	Direct access to public roads from the leased property and access across the leased property are provided under surface rights granted pursuant to the lease agreement.
Power Purchaser	KPLC
PPA Expiration Date	20 years from COD of Plant 2.
Financing	Senior secured project finance loan from OPIC.
Projected Operation	Plant 2 mid-2013 and Plant 3 2014.
Supplemental Information	We amended and restated the existing PPA with KPLC. The amended and restated PPA provides for the construction of a new 36 MW power plant at the Olkaria III complex. The PPA amendment includes an option for additional capacity up to 100 MW. We have closed a limited-recourse senior secured financing with OPIC. See description in Item 7 under New Financing of our Projects .

Wild Rose Project (U.S.)

Location	Mineral County, Nevada

Projected Generating Capacity	16 MW
Projected Technology	The Wild Rose power plant will utilize a binary system.
Material Equipment	Power plant equipment and the Balance of Plant.
Condition	Field development was completed and manufacturing of the power plant equipment is in an advanced stage.

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Subsurface Improvement	Five production and three injection wells have been drilled.
Land and Mineral Rights	The Wild Rose area is comprised of BLM leases.
	The leases are currently held by the payment of annual rental payments, as described above in Description of Our Leases and Lands .
	Unless steam is produced in commercial quantities, the primary term for these leases will expire commencing September 30, 2017.
	The project s rights to use the geothermal and surface rights under the leases are subject to various conditions, as described above in Description of Our Leases and Lands .
Resource Information	The expected average temperature of the resource is between 260 and 265 degrees Fahrenheit.
Access to Property	Direct access to public roads from the leased property and access across the leased property are provided under surface rights granted in leases from BLM.
Power Purchaser	The PPA for this power plant is in the approval process of the off-taker.
Financing	Corporate funds.
Projected Operation	2013

The following is a description of 50 MW projects in Nevada and California that are in an initial stage of construction:

Carson Lake Project (U.S.)

Location	Churchill County, Nevada
Projected Generating Capacity	20 MW
Projected Technology	The Carson Lake power plant will utilize a binary system.
Condition	On hold.
Subsurface Improvements	On hold.

Land and Mineral Rights	The Carson Lake area is comprised of BLM leases.
	The leases are currently held by the payment of annual rental payments, as described above in Description of Our Leases and Lands .
	Unless steam is produced in commercial quantities, the primary term for these leases will expire commencing August 31, 2016.
	The project s rights to use the geothermal and surface rights under the leases are subject to various conditions, as described above in Description of Our Leases and Lands .

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Access to Property	Direct access to public roads from the leased property and access across the leased property are provided under surface rights granted in leases from BLM.
Resource Information	The expected average temperature of the resource cannot be estimated as field development has not been completed yet.
Power Purchaser	We have not executed a new PPA.
Financing	Corporate funds.
Projected Operation	To be determined.
Supplemental Information	Permitting delays have prevented substantial progress on the project site and on transmission until late last year and have had a significant impact on the development plan and the economics of the project. As a result, in December 2011, we terminated the project s PPA and joint operating agreement with Nevada Power Company.

CD4 Project (Mammoth Complex) (U.S.)

Location	Mammoth Lakes, California
Projected Generating Capacity	30 MW
Projected Technology	The CD4 power plant will utilize an air cooled binary system.
Condition	On hold.
Subsurface Improvements	We have completed one production well and one injection well. Continued drilling is subject to receipt of additional permits.
Land and Mineral Rights	The total Mammoth area is comprised mainly of BLM leases, several of which are held by production and the remainder of which are the subject of a unitization agreement that is pending BLM approval. The expiration date of the leases (assuming approval of the unitization agreement) is after the end of the expected useful life of the power plant.
Access to Property	Direct access to public roads from the leased property and access across the leased property are provided under surface rights granted pursuant to the leases.
Resource Information	

	The expected average temperature of the resource cannot be estimated as field development has not been completed yet.
Power Purchaser	We have not executed a PPA.
Financing	Corporate funds.
Projected Operation	To be determined.
Supplemental Information	As part of the process to secure a transmission line, we are participating in the Southern California Edison Wholesale Distribution Access Tariff Transition Cluster Generator Interconnection Process to deliver energy into the Southern California Edison system at the Casa Diablo Substation.

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Future Projects

Projects under Various Stages of Development

We also have projects under various stages of development in the United States, Kenya, Honduras, and Indonesia. We expect to continue to explore these and other opportunities for expansion so long as they continue to meet our business objectives and investment criteria.

The following is a description of the projects currently under various stages of development and for which we are able to estimate their expected generating capacity. Upon completion of these projects, the generating capacity of the geothermal projects would be up to approximately 117 MW (representing our interest). However, we prioritize our investments based on their readiness for continued construction and expected economics and therefore we are not planning to invest in all of such projects this year.

Crump Geyser Project (U.S.)

In October 2010, we and NGP agreed to jointly develop, construct, own and operate one or more geothermal power plants in the Crump Geyser Area located in Lake County, Oregon. All activities will be carried out through CGC, a limited liability company that is owned equally by our wholly owned subsidiary, Ormat Nevada, and NGP.

We will be the EPC contractor for the project, which will utilize our proprietary generating equipment and other Balance of Plant equipment. We will also be the Operator and provide operating and maintenance services to CGC.

We and NGP intend to build an up to 20 MW power plant, which is expected to be placed in service gradually.

Platanares Project (Honduras)

In November 2012, we entered into an agreement with Geotermica Platanares to acquire a late stage development geothermal project in Honduras. The project consists of the rights to a geothermal field where exploration work has been conducted in the past and a PPA for up to 35 MW with ENEE, the national utility of Honduras.

Upon the fulfillment of certain conditions and the closing of the transaction, we will become the owner of all the project s assets, including wells, land, the PPA and the necessary permits to develop a geothermal project. Once the well field is fully appraised and the power plant is constructed, we will hold the assets under a BOT structure for approximately 15 years.

Sarulla Project (Indonesia)

We are a member of a consortium which is in the process of developing the Sarulla geothermal power project in Indonesia, of approximately 330 MW. We own 12.75% of the Indonesian special purpose entity that will develop and operate the project.

The Sarulla project, located in Tapanuli Utara, North Sumatra, represents the largest single-contract geothermal power project to date, reflecting the large scale, high productivity and potential of the Indonesian geothermal resources. The project will be owned and operated by the consortium members under the framework of a Joint Operating Contract (JOC) with PT Pertamina Geothermal Energy, and Energy Sales Contract with PT PLN (the state electric utility which is the off-taker of the electricity from the Sarulla Project). The Sarulla combined cycle geothermal power plant is to be constructed in three equal phases over four years. Ormat s turbines account for about 120 MW of the total expected electricity generation.

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The adjustment of the electricity tariff for the 330 MW Sarulla project has already been agreed between PT PLN and the consortium, based on the verification of the agreed tariff by the BPKP (Indonesian State Auditor for Development). The JOC and the Energy Sales Contract (ESC) amendments are currently in their final stage, reflecting the agreed adjusted tariff as well as other financial and bankability conditions which have been agreed in principle by the relevant Indonesian ministries, such as the Ministry of Energy and Mineral Resources and the Ministry of Finance.

Pending resolution of certain bankability issues, the execution of these amended contracts is expected to occur during the first half of 2013.

Sarulla Operations Ltd. (the project company) has received responses from over ten international banks that were invited to submit proposals to provide limited recourse financing for the Sarulla Project. The expected financing package will consist of direct loans from the Japan Bank for International Cooperation (JBIC) and the Asian Development Bank (ADB), in addition to Extended Political Risk Guarantees to the participating commercial banks by JBIC.

Sarulla Operations Ltd. has mandated certain lenders, while the selection and engagement of due diligence consultants is currently underway.

On the execution side, the EPC contractor was selected and a term sheet for the supply contract, at a total value of approximately $254.0