ORMAT TECHNOLOGIES, INC.
Form 10-K/A
June 19, 2018

Table of Contents

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

Form 10-K/A

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

For the fiscal year ended December 31, 2017

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

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

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 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 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/A or any amendment to this Form 10-K/A.

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 Non-accelerated filer Smaller reporting company

(Do not check if a smaller reporting company) Emerging growth company

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

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

As of June 30, 2017, 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 $2,315,466,032 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 23, 2018, the number of outstanding shares of common stock, par value $0.001 per share was 50,609,051.

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, 2017.

Table of Contents

Certain Definitions

For convenience purposes in this filing on Form 10-K/A, all references to "Ormat", "the Company", "we", "us", "our compa
"Ormat Technologies" or "our" refer to Ormat Technologies, Inc. and its consolidated subsidiaries.

Explanatory Note

This Amendment No. 1 to Form 10-K (this "Amendment") amends the Annual Report on Form 10-K for the year ended December 31, 2017 originally filed with the Securities and Exchange Commission ("SEC") on March 16, 2018 (the "Original Filing") by Ormat Technologies, Inc. (the "Company").

Restatement

As further discussed in Note 1 to our consolidated financial statements in Part II, Item 8, "Financial Statements and Supplementary Data" of this 2017 Amendment, on May 16, 2018, we concluded that we would restate our previously issued consolidated financial statements as of and for the year ended December 31, 2017 to correct for (i) errors in our income tax provision, primarily related to the Company's ability to utilize Federal tax credits in the United States ("U.S.") prior to their expiration starting in 2027, and the resulting impact on the Company's deferred tax asset valuation allowance, and (ii) the inappropriate netting of certain deferred income tax assets and deferred income tax liabilities across different tax jurisdictions that was not permissible under U.S. generally accepted accounting principles. In addition, there were other immaterial prior period errors, including an out-of-period adjustment that had been previously recorded for the correction of an understated liability for unrecognized tax benefits related to intercompany interest. We also concluded that we would revise our previously issued consolidated financial statements as of and for the year ended December 31, 2016 and for the year ended December 31, 2015 to correct for errors in our income tax provision, primarily related to the translation of deferred tax liabilities in a foreign subsidiary. The restatements, for 2017, and revisions, for 2016 and 2015, is being effected through the Company's filing of this Amendment. In connection with these restatements and revisions, the Company also recorded adjustments to correct other immaterial tax errors. This decision to restate and revise our previously issued financial statements was approved by, and with the continuing oversight of, the Company's Board of Directors upon the recommendation of its Audit Committee.

These error corrections also resulted in the restatement, for 2017, and revision, for 2016, of the Company's previously issued unaudited condensed consolidated financial statements for the three and six months ended June 30, 2017 and 2016, respectively, and the three and nine months ended September 30, 2017 and 2016, respectively, which restatements and revisions have been effected through the Company's filing of an amendment on Form 10-Q/A for the quarter ended June 30, 2017 and an amendment on Form 10-Q/A for the quarter ended September 30, 2017. The

revision of the Company's previously issued unaudited condensed consolidated financial statements for the quarter ended March 31, 2017 will be effected in connection with the Company's filing of its Form 10-Q for the quarter ended March 31, 2018. The impact of the restatement and revision of these unaudited periods, along with the restatement of the financial results for the quarter ended December 31, 2017 and the revision of the financial results for the quarter ended December 31, 2016, has been reflected within the unaudited quarterly financial information footnote in Part II, Item 8. "Financial Statements and Supplementary Data".

Internal Control Over Financial Reporting

Management, under the supervision and participation of our Chief Executive Officer and our Chief Financial Officer, has conducted an evaluation of the effectiveness of our internal control over financial reporting as of December 31, 2017 using criteria established in *Internal Control — Integrated Framework (2013)* issued by the COSO and, based on this evaluation, concluded that our internal control over financial reporting was not effective as of December 31, 2017 as a result of the material weakness in our internal control over financial reporting. For a description of the material weakness in internal control over financial reporting and for an amended Management's Report on Internal Control over Financial Reporting, see Part II, Item 9A. "Controls and Procedures" of this Amendment.

Table of Contents

Amendment

The purpose of this Amendment is to (i) restate the Company's previously issued consolidated financial statements and related disclosures as of and for the year ended December 31, 2017, (ii) revise the Company's consolidated financial statements as of and for the year ended December 31, 2016 and for the year ended December 31, 2015, all contained in Part II, Item 8. "Financial Statements and Supplementary Data"; and (iii) revise the Selected Financial Data in Part II, Item 6. This Amendment also includes (a) in Part I, Item 1A: Risk Factors, revised disclosures relating to the material weakness and timeliness of periodic SEC filings, (b) in Part II, Item 8, restated unaudited quarterly financial data for each of the quarters ended June 30, September 30 and December 31, 2017 and revised unaudited quarterly financial data for each quarter in the year ended December 31, 2016 and for the quarter ended March 31, 2017, (c) in Part II, Item 7. "Management's Discussion and Analysis of Financial Condition and Results of Operations," to reflect the correction of the errors described above and (d) an additional paragraph in Part II, Item 9A. "Controls and Procedures" including "Management's Report on Internal Control Over Financial Reporting" of the Original Filing to reflect the conclusions by the Company's management that the identified deficiency in the design of the Company's internal control over financial reporting related to its accounting for income taxes resulted in the errors described above. In addition, the Company has updated Note 24 to the consolidated financial statements contained in Part II, Item 8. "Financial Statements and Supplementary Data" to include disclosure of subsequent events occurring through the date of the filing of this Amendment.

Except as expressly set forth herein, this Amendment does not reflect events occurring after the date of the Original Filing or modify or update any of the other disclosures contained therein in any way other than as required to reflect the amendment discussed above. Accordingly, this Amendment should be read in conjunction with the Original Filing and our other filings with the SEC.

In addition, as required by Rule 12b-15 under the Securities Exchange Act of 1934, as amended, new certifications by our principal executive officer and principal financial officer are filed as exhibits to this Amendment.

Items Amended in this Filing

For reasons discussed above, we are filing this Amendment in order to amend the following items in our Original Report to the extent necessary to reflect the adjustments discussed above and make corresponding revisions to our financial data cited elsewhere in this Amendment:

Part I, Item 1A. Risk Factors
Part II, Item 6. Selected Financial Data
Part II, Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations

Part II, Item 8. Financial Statements and Supplementary Data
Part II, Item 9A. Controls and Procedures

In accordance with applicable SEC rules, this Amended Report includes new certifications required by Rule 13a-14 under the Securities Exchange Act of 1934 from our Chief Executive Officer and Chief Financial Officer dated as of the date of filing of this Amended Report.

Table of Contents

ORMAT TECHNOLOGIES, INC.

FORM 10-K/A FOR THE YEAR ENDED DECEMBER 31, 2017

TABLE OF CONTENTS

Table of Contents

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	$42,000,000 in initial aggregate principal amount borrowed by our subsidiary Ortitlan Limitada from Banco Industrial S.A. and Westrust Bank (International) Limited.
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.
BESS	Battery Energy Storage Systems
BLM	Bureau of Land Management of the U.S. Department of the Interior
BOT	Build, operate and transfer
CAGR	Compound annual growth rate
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	Caisse des Dépôts et Consignations, a French state-owned financial organization
CFE	Comision Federal de Electricidad
C&I	Refers to the Commercial and Industrial sectors, excluding residential
CNE	National Energy Commission of Honduras
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
Cyrq	Cyrq Energy, Inc.
DEG	Deutsche Investitions-und Entwicklungsgesellschaft mbH
DFIs	Development Finance Institutions
DOE	U.S. Department of Energy
DOGGR	California Division of Oil, Gas, and Geothermal Resources
DSCR	Debt Service Coverage Ratio
DSIRE	Database of State Incentives for Renewables and Efficiency
EBITDA	Earnings before interest, taxes, depreciation and amortization
EDF	Electricite de France S.A.

EGS	Enhanced Geothermal Systems
EIB	European Investment Bank
ENEE	Empresa Nacional de Energía Eléctrica
Enthalpy	The total energy content 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.

Table of Contents

Term	Definition
EPA	U.S. Environmental Protection Agency
EPC	Engineering, procurement and construction
EPS	Earnings per share
ERC	Kenyan Energy Regulatory Commission
ERCOT	Electric Reliability Council of Texas, Inc.
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
FIT	Feed-in Tariff
FPA	U.S. Federal Power Act, as amended
GAAP	Generally accepted accounting principles
GCCU	Geothermal Combined Cycle Unit
GDC	Geothermal Development Company
GEA	Geothermal Energy Association
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
GTM	Green Tech Media
GW	Giga watt
GWh	Giga watt hour
HELCO	Hawaii Electric Light Company
IFC	International Finance Corporation
IID	Imperial Irrigation District
ILA	Israel Land Administration
INDE	Instituto Nacional de Electrification
IOUs	investor-owned utilities
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
JBIC	Japan Bank for International Cooperation
John Hancock	John Hancock Life Insurance Company (U.S.A.)
JOC	Joined operation contract
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
LCOE	Levelized Costs of Energy

LSEs	Load Serving Entities
Mammoth Pacific	Mammoth-Pacific, L.P.
MACRS	Modified Accelerated Cost Recovery System
MEMR	Ministry of Energy and Mineral Resources
MIGA	Multilateral Investment Guarantee 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 energy produced

Table of Contents

Term	Definition
NBPL	Northern Border Pipe Line Company
NIS	New Israeli Shekel
NOC	network operations center
NGI	Natural Gas-California SoCal-NGI Natural Gas price index
NV Energy	NV Energy, Inc.
NYSE	New York Stock Exchange
NYISO	New York Independent System Operator, Inc.
OEC	Ormat Energy Converter
OFC	Ormat Funding Corp., a wholly owned subsidiary of the Company
OFC Senior Secured Notes	$190,000,000 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	Up to $350,000,000 Senior Secured Notes, due 2034 issued by OFC 2
OMPC	Ormat Momotombo Power Company, a wholly owned subsidiary of the Company
Opal Geo	Opal Geo LLC
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	$165,000,000 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
ORPD	ORPD LLC, a holding company subsidiary of the Company in which Northleaf Geothermal Holdings, LLC holds a 36.75% equity interest
ORPD Transaction	Financing transaction involving the Puna complex and Don A. Campbell, OREG 1, OREG 2 and OREG 3 power plants in which Northleaf Geothermal Holdings, LLC purchased an equity interest in our special purpose subsidiary that owns such plants.
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

Table of Contents

Term	Definition
ORTP Transaction	Financing transaction involving power plants in Nevada and California in which an institutional equity investor purchased an interest in our special purpose subsidiary that owns such plants.
Orzunil	Orzunil I de Electricidad, Limitada, a wholly owned subsidiary of the Company
PEC	Portfolio Energy Credits
PG&E	Pacific Gas and Electric Company
PGV	Puna Geothermal Venture, a wholly owned subsidiary of the Company
PJM	PJM Interconnection, L.L.C.
PLN	PT Perusahaan Listrik Negara
Power plant equipment	Interconnection equipment, cooling towers for water cooled power plant, etc., including the generating units
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
RPS	Renewable Portfolio Standards
RTO	Regional Transmission Organization
SaaS	Software as a Service
SCADA	Supervisory Control and Data Acquisition
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
SOL	Sarulla Operations Ltd.
Solar PV	Solar photovoltaic
SOX Act	Sarbanes-Oxley Act of 2002
Southern California Edison	Southern California Edison Company
SPE(s)	Special purpose entity(ies)
SRAC	Short Run Avoided Costs
	Southern California Edison Company

Southern California Edison	
SPE(s)	Special purpose entity(ies)
SRAC	Short Run Avoided Costs
Union Bank	Union Bank, N.A.
U.S.	United States of America
U.S. Treasury	U.S. Department of the Treasury
VEI	Viridity Energy, Inc.
Viridity	Viridity Energy Solutions Inc., our wholly owned subsidiary
WHOH	Waste Heat Oil Heaters

Table of Contents

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”, “pr “projects”, “potential”, or “contemplate” or 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 1 — “Business” contained in Part I of this annual report, Item 1A — “Risk Factors” contained in Part I of this annual report, Item 7 — “Management’s Discussion and Analysis of Financial Condition and Results of Operations” contained in Part II of this annual report, 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 and competition with other renewable sources on the energy price component under certain of our PPAs;

risks and uncertainties with respect to our ability to implement strategic goals or initiatives in segments of the clean energy industry or new or additional geographic focus areas;

risk and uncertainties associated with our future development of storage projects which may operate as "merchant" facilities without long-term sales agreements, including the variability of revenues and profitabilty of such projects;

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 U.S. and other countries in which we operate and, in particular, 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;

the enforceability of long-term PPAs for our power plants;

contract counterparty risk;

weather and other natural phenomena including earthquakes, volcanic eruption, drought and other natural disasters;

Table of Contents

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;

current and future litigation;

our ability to successfully identify, integrate and complete acquisitions;

competition from other 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;

there can be no assurance regarding when, if and to what extent opportunities under our commercial cooperation agreement with ORIX Corporation will in fact materialize;

the direct or indirect impact on our company's business of various forms of hostilities including the threat or occurrence of war, 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;

our new strategic plan to expand our geographic markets, customer base and product and service offerings may not be implemented as currently planned or may not achieve our goals as and when implemented;

development and construction of Solar PV and energy storage 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.

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 Technologies”, or “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.

Table of Contents

Overview

We are a leading vertically integrated company that is currently primarily engaged in the geothermal and recovered energy power business. With the objective of becoming a leading global provider of renewable energy, we focus on several key initiatives, under our new strategic plan, as described below.

We design, develop, build, sell, 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 we have built all of our recovered energy-based plants. We recently expanded our operations to include the provision of services in the energy storage, demand response and energy management markets. We currently conduct our business activities in two business segments:

In the Electricity segment we develop, build, own and operate geothermal and recovered energy-based power plants in the U.S. and geothermal power plants in other countries around the world and sell the electricity they generate. We also provide energy storage, demand response and energy management related services through our Viridity business; and

In the Product segment we design, manufacture and sell equipment for geothermal and recovered energy-based electricity generation and remote power units and provide services relating to the engineering, procurement, construction, operation and maintenance of geothermal and recovered energy-based power plants and in the future, other power generating units such as Solar PV and energy storage

In March 2017, we expanded our Electricity segment operations by entering the energy storage, demand response and energy management markets following the acquisition of substantially all of the business and assets of Viridity Energy, Inc. (VEI), a Philadelphia-based company. The acquired business and assets are owned and operated by our wholly owned subsidiary Viridity Energy Solutions Inc. (Viridity). We intend to use our Viridity business to accelerate long-term growth, expand our market presence in a growing market, and further develop our energy storage, demand response and energy management services, including the VPower™ software platform. We plan to continue providing services and products to existing Viridity customers, while expanding our service offerings to include development and EPC into new regions and targeting a broader potential customer base.

Table of Contents

The map below shows our worldwide portfolio of operating geothermal and recovered energy power plants as of March 1, 2018.

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 the fiscal year ended December 31, 2017. Additional information concerning our segment operations, including year-over-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”.

Table of Contents

The following chart sets forth a breakdown of our revenues for each of the years ended December 31, 2017 and 2016:

The following chart sets forth the geographical breakdown of revenues attributable to our Electricity and Product segments for each of the years ended December 31, 2017 and 2016:

Note: Electricity segment revenues for 2017 in the "Segment Contribution to Revenue" and "Geographic Breakdown of the Electricity Segment Revenue" charts above include our energy storage and demand response activity.

Table of Contents

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. In addition, compared to power plants that utilize other renewable energy sources, such as wind or solar, geothermal power plants are generally available all the time and can provide base-load electricity services. They can also be custom built to provide a range of services such as baseload, voltage regulation, reserves and flexible capacity. 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 comes from 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.

Since 2015, we have implemented a number of elements of our new multi-year strategic plan which was reviewed by our Board of Directors (the “Board”) in 2017. We expect the plan to evolve over time in response to market conditions and other factors. At this time, however, we expect that our primary focus will be as follows:

Expand our geothermal geographical reach. While we continue to evaluate opportunities worldwide, we currently see, Honduras, New Zealand, Philippines, Chile, Indonesia, Turkey, Kenya, Guatemala, China and Ethiopia as very attractive geothermal markets for us. We are actively looking at ways to expand our presence in those countries. In addition, we are looking to expand and accelerate growth through acquisitions and other investments, both domestically and globally, such as our recent acquisition of a geothermal power plant in Guadeloupe in the Caribbean and our recent announcement of the execution of a definitive agreement to acquire U.S. Geothermal Inc., which has three operating power plants in the U.S.

Expand into new technologies. We ultimately hope to be able to leverage our technological capabilities over a variety of renewable energy platforms, including solar power generation and energy storage. Initially, however, we expect that our primary focus will be on expanding our core geothermal competencies to provide high efficiency solutions for high enthalpy applications by utilizing our binary enhanced cycle and technology, as well as expanding into steam geothermal generation equipment and facilities. We may acquire companies with technological and integration capabilities we do not currently have, or develop new technology ourselves, where we can effectively leverage our expertise to implement this part of our strategic plan.

Expand our customer base. We are evaluating a number of strategies for expanding our customer base to C&I customers. In the near term, however, we expect that a majority of our revenues will continue to be generated as they currently are, with our traditional electrical utility customer base for the Electricity segment and our on-going business development efforts for new customers for our Product segment.

While we believe that long-term growth can be realized through our transformational efforts over time, there is no assurance if and when we will meet our objective to become a leading global provider of renewable energy or that such efforts will result in long-term growth. We see these new initiatives as incremental measures to enhance shareholder value. While we implement the plan, we expect to continue, and expand, through organic growth, acquisitions, and other measures, our current business lines both in the Electricity and Product segments as well as other business lines as described above.

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.

Table of Contents

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 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.

Table of Contents

Our Power Generation Business (Electricity Segment)

Power Plants in Operation

The table below summarizes certain key non-financial information relating to our power plants and complexes as of March 1, 2018. The generating capacity of certain of our power plants and complexes listed below has been updated from our 2016 disclosure to reflect changes in the resource temperature and other factors that impact resource capabilities:

Type	Region	Plant	Ownership[1]	Generating capacity (MW) [2]	Region 2016 Capacity Factor
Geothermal	California	Ormesa Complex	100%	40	
		Heber Complex	100%	89	
		Mammoth Complex	100%	29	
		Brawley	100%	13	
					77%
	West Nevada	Steamboat Complex	100%	70	
		Brady Complex	100%	18	
					87%
	East Nevada	Tuscarora	100%	18	
		Jersey Valley	100%	10	
		McGinness Hills	100%	90	
		Don A. Campbell	63.3%	41	
		Tungsten Mountain	100%	26[3]	
					94%
	Hawaii	Puna	63.3%	38	
					97%
	International	Amatitlan (Guatemala)	100%	20	
		Zunil (Guatemala)	97%	23	
		Olkaria III Complex (Kenya)	100%	139	
		Bouillante (Guadeloupe Island)	60%[4]	15	
		Platanares (Honduras)	100%	35[5]	
					94%
Total Consolidated Geothermal				714	88%
Unconsolidated Geothermal	Indonesia	Sarulla (SIL & NIL 1)	12.75%	28	

REG	OREG 1	63.3%	22	
	OREG 2	63.3%	22	
	OREG 3	63.3%	5.5	
	OREG 4	100%	3.5[6]	
Total REG			53	84%
Total			**795**	

1. We indirectly own and operate all of our power plants, although financial institutions hold equity interests in one of our subsidiaries, Opal Geo, which owns the McGinness Hills geothermal power plant complex, the Tuscarora and Jersey Valley power plants and the second phase of the Don A. Campbell power plant, all located in Nevada. In the table above, we list these power plants as being 100% owned because all of the generating capacity is owned by Opal Geo and we control the operation of the power plants. The nature of the equity interests held by the financial institution is described below in Item 7 — “Management’s Discussion and Analysis of Financial Condition and Results of Operations” under the headings “Opal Geo Transaction”.

Table of Contents

Notwithstanding our approximately 60% equity interest in the Bouillante power plant and 63.25% direct equity interest in the Puna, the first phase of Don A. Campbell, OREG 1, OREG 2 and OREG 3 power plants as well as the indirect interest in the second phase of the Don A. Campbell power plant owned by our subsidiary, ORPD LLC ("ORPD"), we list 100% of the generating capacity of the Bouillante power plant and the power plants in the ORPD portfolio in the table above because we control their operation. We list our 12.75% share of the generating capacity of the Sarulla power plant as we own a 12.75% minority interest. The revenues from the Sarulla project are not consolidated and are presented under "Equity in earnings (losses) of investees, net" in our financial statements.

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

3. The 26 MW Tungsten Mountain power plant in Nevada commenced commercial operation on December 1, 2017.

4. We own 60%, and each of CDC and Sageos own 20%, of the Bouillante power plant. We and CDC hold our respective 60% and 20% equity interests in the Bouillante power plant through GB.

5. The 35 MW Platanares power plant in Honduras commenced commercial operation on September 26, 2017.

6. The OREG 4 power plant is not operating at full capacity because of low run time of the compressor station that serves as the power plant's heat source. This results in lower power generation.

All of the revenues that we derive from the sale of electricity are pursuant to long-term PPAs. Approximately 45.8% of our total revenues in the year ended December 31, 2017 were derived from the sale of electricity by our power plants to 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 of new power plants and expansion of existing power plants. Our construction and expansion plan include 72 MW in generating capacity from geothermal power plants in the U.S., Kenya and Indonesia that are fully released for construction. In addition, we have several projects in the U.S., Guadeloupe, Kenya and Honduras that are either under initial stages of construction or under different stages of development with an aggregate capacity of between 115 MW and 120 MW.

We have substantial land positions across 32 prospects in the U.S., Guatemala, Guadeloupe, Kenya, New Zealand, Honduras and Ethiopia that we expect will support future geothermal development, on which we have started or plan to start exploration activity. These land positions are comprised of various leases, exploration concessions for geothermal resources and an option to enter into geothermal leases.

In addition, we are currently developing three storage systems, one behind-the-meter system and two in-front-of-the-meter (IFM) systems in New Jersey.

New activity

On March 15, 2017, we completed the acquisition of our Viridity business as described above.

Our Viridity business currently manages curtailable customer loads of over 875 MW across 3,000 sites under contracts with leading U.S. retail energy providers and directly with large C&I customers, including management of a portfolio of non-utility storage assets located in the northeastern U.S. with over 80,000 operational market hours. We serve our distributed customers through a network operations center (NOC), which is operated 24/7 using our VPowerMarkets™ software platform and a SCADA platform. VPower™ services are provided to customers using a SaaS model under which we receive license fees and/or a portion of the revenue and savings that are achieved for our Viridity customers.

We expect that the eco system we created, combining our Viridity capabilities and our overall capabilities, including among others, our global presence, experience in technology and system integration, EPC of power generation projects, flexible business models, and our reputation and experience in the geothermal and recovered energy sectors, will enable us to expand in the growing energy storage sector.

Table of Contents

In connection with the acquisition of our Viridity business, we assumed certain contractual duties and obligations that are regulated by the Federal Energy Regulatory Commission (FERC) and certain independent system operators (ISOs) and regional transmission organizations (RTOs). Specifically, our Viridity business obtained and maintains authorization from FERC to make wholesale sales of power, capacity, and ancillary services at market-based rates, and we have confirmed membership status with eligibility to serve designated contractual functions within each of the following ISOs and RTOs: PJM Interconnection LLC (PJM), New York Independent System Operator, Inc. (NYISO), and the Electric Reliability Council of Texas (ERCOT). Additionally, during the fourth quarter of 2017, we received formal notice of membership in Midcontinent Independent System Operator (MISO) and ISO New England Inc. and have filed for membership in Independent Electricity System Operator (IESO – Ontario Canada). In the future, we may need to obtain and maintain similar membership and eligibility status with other ISO and RTO markets in which our Viridity business will operate.

Our Product Business (Product Segment)

We design, manufacture and sell products for electricity generation and provide the related services described below. We primarily manufacture products to fill customer orders, but in some situations, we may manufacture products as inventory for future internal and external projects.

Power Units for Geothermal Power Plants. We design, manufacture and sell power units for geothermal electricity generation, which we refer to as OECs. In geothermal power plants using OECs, geothermal fluid (either hot water (also called brine) or steam or both) is extracted from the underground reservoir and flows from the wellhead to a vaporizer that also heats a secondary working fluid, which is vaporized and used to drive the turbine. The secondary fluid is then condensed in a condenser, which may be cooled directly 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. Our customers include contractors and geothermal power plant developers, 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 serve as an EPC contractor for 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 our target customers for the sale of our recovered energy-based power units as described above. Unlike many other companies that provide EPC services, we believe we have an advantage in that we are using equipment that we manufacture and thus have better quality and 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 capacities ranging from 200 watts to 5,000 watts, which operate unattended in extreme hot or cold climate conditions. Our customers include contractors who install gas pipelines in remote areas and off-shore platforms operators and contractors. In addition, we design, manufacture, and sell generators, including heavy duty direct-current generators, for various other uses. We are in the process of slowing down these activities.

History

Ormat Technologies, Inc. was formed as a Delaware corporation in 1994 by our former parent company Ormat Industries. 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. On February 12, 2015, we successfully completed the acquisition of Ormat Industries in an all-stock merger, eliminating its majority ownership and control of Ormat Technologies.

Industry Background

Geothermal Energy

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

Table of Contents

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: (i) 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 geothermal fluids and (ii) 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.

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 as a by-product of oil and gas extraction. When oil and gas wells are deep, the extracted fluids are often at high temperatures and if the water volume associated with the extracted fluids 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 briefly 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 pentane or butane, which is vaporized and is used to drive the turbine. The organic fluid is then condensed in a

condenser, which may be cooled directly by air or by water from a cooling tower and sent back to the vaporizer through a pump. The cooled geothermal fluid is then reinjected back into the reservoir. The operation of our air-cooled binary geothermal power plant is depicted in the diagram below.

Table of Contents

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, where any remaining water droplets are removed. This produces a stream of dry saturated steam, which drives a steam 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 by means of a vacuum system in order to maintain the performance of the steam condenser. The resulting condensate is used to provide make-up water for the cooling tower. The hot brine remaining after separation of steam is injected (either directly or after passing through a binary plant to produce additional power from the residual heat remaining in the brine) 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 and the steam is fed directly to the steam turbine with the rest of the system similar to the flash technology described above.

Our Proprietary Technology

Our proprietary technology may be used either in power plants operating according to the Organic Rankine Cycle 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 computational fluid dynamics techniques 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 always examining ways to increase the output of our plants by utilizing evaporative cooling, cold reinjection, configuration optimization, 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 other thermodynamic cycle alternations along with new motive fluids.

We also developed, patented and constructed 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. Our Geothermal Combined Cycle technology is depicted in the diagram below.

17

Table of Contents

In the conversion of geothermal energy into electricity, our technology has a number of advantages over conventional geothermal steam turbine plants. A conventional geothermal steam turbine plant consumes significant quantities of water, causing depletion of the aquifer and requiring 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 minimal 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 maintenance and higher yearly availability. For instance, the OEC employs a low speed and high efficiency organic vapor turbine directly coupled to the generator, eliminating the need for reduction gear. In addition, with our binary design, there is no contact between the turbine blade and geothermal fluids, which can often be very corrosive and erosive. Instead, the geothermal fluids pass through a heat exchanger, which is less susceptible to erosion and can adapt much better to corrosive fluids. In addition, with the organic vapor condensed above atmospheric pressure, no vacuum system is required.

We use the same elements of our technology in our recovered energy products. The heat source may be exhaust gases from a Brayton cycle gas turbine, low-pressure steam, or medium temperature liquid found in the process industries such as oil refining and cement manufacturing. In most cases, we attach an additional heat exchanger in which we circulate thermal oil or water 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 that of the OECs 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, requires no water treatment (since it is air cooled and organic fluid motivated), and does not require the continuous presence of a licensed steam boiler operator on site.

Table of Contents

Our REG technology is depicted in the diagram below.

Patents

We have 77 U.S. patents that are in force (and have approximately 9 U.S. patents pending). These patents and patent applications 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 as well as control of operation of geothermal production well pumps. The system-related patents cover not only particular components but also the overall energy conversion system from the “fuel supply” (e.g., geothermal fluid, waste heat, biomass or solar) to electricity production.

The system-related patents also cover subjects such as waste heat recovery related to gas pipeline compressors and industrial waste heat, solar power systems, disposal of non-condensable gases present in geothermal fluids, power plants for very high pressure geothermal resources, two-phase fluids, low temperature geothermal brine as well as processes related to EGS. A number of our 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 remaining terms of our patents range from one year to 16 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 activities intended to improve plant performance, reduce costs, and increase the breadth of our product offerings. The primary focus of our research and development efforts is targeting power plant conceptual thermodynamic cycle and major equipment including continued performance, cost and land usage improvements to our condensing equipment, and development of new higher efficiency and higher power output turbines.

Our Viridity business continues to develop new optimization algorithms to optimize the life of a battery energy storage system (BESS), to optimize our and our customers’ economic return and to forecast the trends surrounding our customers’ electricity consumption and the electric grid including times of peak demands and the usage of ancillary services.

We have also focused our development efforts on the engineering and design of improved energy storage systems. These development efforts include, among others, further development of the control hardware and software for energy storage systems to follow electric grid and market signals and to optimize their delivery of energy into the markets using our VPower™ software and SCADA platform to accelerate system optimization through cloud base algorithms.

We have developed, and continue to develop, system integration capabilities that match the appropriate system and system sizing with the appropriate battery chemistry, electrical and physical components to accommodate our needs or needs of the customers that will own such energy storage systems in light of the markets in which they will operate. We are searching for alternative chemistries, products and combinations of hybrid solutions to best address our energy storage product customers' needs.

Table of Contents

Additionally, we are continuing to evaluate investment opportunities in new companies with technology and/or product offerings for renewable energy and energy storage solutions.

Market Opportunity

Geothermal Market Opportunities

United States

Interest in geothermal energy in the U.S. remains strong for numerous reasons, including legislative support, RPS goals, coal and nuclear base-load retirements, and increasing awareness of the positive value of geothermal characteristics as compared to intermittent renewable technologies.

Today, electricity generation from geothermal resources is concentrated mainly in California, Nevada, Hawaii, Idaho, Oregon, and Utah, and we believe there are opportunities for development in other states such as New Mexico due to the potential of their geothermal resources.

In a report issued in March 2016, the GEA indicated that the U.S. geothermal industry had about 3,700 MW of installed nameplate capacity and over 80 active projects with a cumulative capacity of over 1,250 MW of geothermal projects under various phases of consideration or development in 10 U.S. states.

Geothermal energy provides numerous benefits to the U.S. grid and economy, according to another GEA report issued in January 2017. Geothermal development and operation brings economic benefits in the form of taxes and long term high-paying jobs, and it currently has one of the lowest LCOE of all power sources in the U.S. Additionally, improvements in geothermal production make it possible to provide ancillary and on-demand services. This helps load serving entities avoid additional costs from purchasing and then balancing intermittent resources with storage or new transmission.

State level legislation

In response to increasing demand for “green” energy, many states have adopted legislation requiring, and providing incentives for, electric utilities to sell electricity generated from renewable energy sources. In the U.S., 37 states plus the District of Colombia and four territories have enacted an RPS, renewable portfolio goals, or similar laws requiring or encouraging utilities in such states to generate or buy a certain percentage of their electricity from renewable energy or recovered heat sources.

According to the Database of State Incentives for Renewables and Efficiency (DSIRE), 30 states (including California, Nevada, and Hawaii, where we have been the most active in our geothermal energy development and in which all of our operating U.S. geothermal power plants are located), two territories, and the District of Columbia define geothermal resources as “renewable”. In addition, according to the EPA, 25 states have enacted RPS, Clean Energy Standards, Energy Efficiency Resource Standards or Alternative Portfolio Standards program guidelines that include some form of combined heat and power and/or waste heat recovery.

We see the impact of RPS legislation as the most significant driver for us to expand existing power plants and to build new projects.

California

California’s RPS program now requires Load Serving Entities (LSEs), including investor-owned utilities (IOUs), electric service providers, community choice aggregators, and publicly owned utilities to increase their share of procurement from eligible renewable energy resources as a percentage of their total procurement. The RPS requires LSEs to procure 33 percent of their energy from renewable resources by 2020, ramping up to 50 percent in 2030, with interim targets of 40 percent by 2024 and 45 percent by 2027. The expanded RPS target should benefit geothermal energy, which has the advantage of generating flexible base load power, helping California diversify its mix of renewable resources.

Table of Contents

In 2014, AB 2363 became effective, requiring the CPUC to adopt, by December 31, 2015, a methodology for determining the costs of integrating eligible renewable energy resources. The process has experienced some delays, and currently, the CPUC is incorporating the development of this methodology into its Integrated Resource Planning process. While the CPUC has issued draft guidelines for integrated resource planning in late 2017, the renewable integration issues assessment remain unresolved. The CPUC has implemented a capacity assessment mechanism that tends to favor dispatchable resources, including geothermal, giving them a higher overall capacity value than variable resources such as wind and solar.

Nevada

In 2016, Nevada's RPS required that at least 20% of electricity sold to Nevada retail customers be from renewable energy resources and credits, and at least 6% of that amount be from solar resources. According to NV Energy's Annual RPS Compliance Report, in 2016, both Nevada Power and Sierra Pacific Power exceeded 2016 RPS standard requirements, achieving a total of 22.2% and 26.6% respectively.

Hawaii

Hawaii established a renewable portfolio goal in 2001. Since 2001, the RPS targets were revised and expanded. On June 2015, Hawaii became the only state with a legislative goal of 100% renewable energy by 2045 with the signing of HB 623. The new policy includes interim requirements of 15% by the end of 2015, 30% by the end of 2020, 40% by 2030, and 70% by 2040, ultimately reaching 100% renewable electricity by 2045.

In 2016, Hawaiian Electric Company and its subsidiaries exceeded the 2015 RPS requirement, achieving a consolidated RPS of 25.8% of retail electricity sales from eligible renewable energy resources.

Federal level legislation

On August 3, 2015, President Obama and the EPA announced the Clean Power Plan that sets standards for power plants and customized goals for states to cut carbon pollution. The goal of the proposed plan includes cutting carbon emissions from the power sector by 32% below 2005 levels nationwide by 2030. In February 2016, the Supreme Court of the U.S. granted a temporary stay halting implementation of the Clean Power Plan pending resolution of legal challenges to the proposed plan. The U.S. Court of Appeals for the District of Columbia Circuit heard oral arguments in the cases challenging the Clean Power Plan on September 27, 2016.

On March 28, 2017, President Donald Trump signed the Executive Order on Energy Independence (E.O. 13783), which in part calls for a review of the Clean Power Plan. On October 10, 2017, the EPA issued a Notice of Proposed Rulemaking (NPRM), proposing to repeal the Clean Power Plan. After reviewing the Clean Power Plan, the EPA has proposed to determine that the Obama-era regulation exceeds the agency's statutory authority.

The federal government encourages production of electricity from geothermal resources or solar energy through certain tax subsidies. For a new geothermal power plant in the U.S. that started construction by December 31, 2017, we are permitted to claim an investment tax credit for 30 percent of the project cost in the year the project is put in service or production tax credits over time on the power produced. The production-based credits, which in 2017 were 2.4 cents per kWh, are adjusted annually for inflation and may be claimed for 10 years on the net electricity output sold to third parties after the project is first placed in service. Any project that started construction by December 2017 must ordinarily be put in service within four years after the end of the year in which construction started to qualify for tax credits at these rates. For a new geothermal power plant in the U.S. that started construction after 2017, we are permitted to claim an investment tax credit of 10 percent of the project cost.

Table of Contents

New solar projects that are under construction by December 2019 will qualify for a 30 percent investment tax credit. The credit will fall to 26 percent for projects starting construction in 2020 and 22 percent for projects starting construction in 2021. Projects that are under construction before these deadlines must be placed in service by December 31 2023 to qualify for investment tax credits at these rates. Solar projects placed in service after December 31, 2023 will only qualify for a 10 percent investment tax credit, on par with the permanent credit provided to geothermal. Under current tax rules, any unused tax credit has a one-year carry back and a twenty-year carry forward.

The tax credits are potentially exposed to claw back under a new base erosion and anti-abuse tax or "BEAT" that took effect on January 1, 2018. See the discussion under Item 1A — “Risk Factors”.

New U.S. federal tax legislation, commonly referred to as the Tax Cuts and Jobs Act (the “Tax Act”), enacted at the end of December 2017 reduced the corporate income tax rate from 35 percent to 21 percent starting in 2018. This is likely to reduce the amount of tax equity that can be raised to finance renewable energy projects but should increase after-tax earnings from operating projects after the initial period when the project is being depreciated.

The Tax Act also allows the cost of new or used equipment purchased from third parties to be "expensed" or deducted immediately. This change applies to equipment put in service after September 27, 2017. However, it does not apply to equipment that we contracted to acquire on or before September 27. This full expensing applies to equipment put in service through 2022. After that, the percentage that can be expensed drops by 20 percent a year until it reaches zero in 2027.

There are other changes in the Tax Act that are potentially favorable to us, such as U.S. corporations will no longer be taxed on dividends from foreign corporations in which they own at least a 10 percent interest to the extent the dividends are paid out of future earnings earned outside the U.S., and income from cross-border sales of turbines and other "inventory" will be treated as earned in the country where the items were manufactured rather than earned partially or entirely in the country where the inventory is sold. There are also other potentially unfavorable provisions, such as a new annual tax on global intangible low--taxed income, or "GILTI." We have not yet made a full assessment of the impact of the Tax Act on our future earnings or operations. See Item 7 — “Management’s Discussion and Analysis of Financial Condition and Results of Operations” for further discussion.

Global

We believe the global markets continue to present growth and expansion opportunities in both established and emerging markets.

According to the GEA's Geothermal Power: International Market Update, the global geothermal market was developing about 2.5 GW of planned capacity spread across 23 countries. Additionally, the GEA estimates that, based on current data, the global geothermal industry is expected to grow from 13.8 GW today to reach 23 GW by 2021.

The assessment conducted by the GEA is only an estimate that is based on projects and resource reporting by the geothermal industry. A developer's ability to fully develop a geothermal resource is dependent upon its capabilities to identify the resource and conduct exploration, development and construction; therefore, this estimate may not be accurate. We refer to it only as a possible reference point, but we do not necessarily concur with this estimate.

Operations outside of the U.S. may be subject to and/or benefit from increasing efforts by governments and businesses around the world to fight climate change and move towards a low carbon, resilient and sustainable future. According to a 2017 report from the International Renewable Energy Agency entitled Rethinking Energy, to date, more than 170 countries have established renewable energy targets, and nearly 150 have enacted policies to catalyze investments in renewable energy technologies.

In December 2015, 197 countries signed an historic agreement at the COP21 UN Climate Change Conference held in Paris. For the first time, all countries committed to setting nationally determined climate targets and reporting on their progress. The agreement's aim is to keep global temperature rise this century well below 2 degrees Celsius and to drive efforts to limit the temperature increase even further to 1.5 degrees Celsius above pre-industrial levels. According to the United Nations Framework Convention on Climate Change (UNFCCC), the submission of national targets in five-year cycles signals to investors and technology innovators that the world will demand clean power plants, energy efficient factories and buildings, and low-carbon transportation in the decades to come.

The Paris Agreement entered into force on November 4, 2016, thirty days after the date on which at least 55 parties to the Convention accounting in total for at least an estimated 55% of the total global greenhouse gas emissions deposited their instruments of ratification, acceptance, approval or accession with the Depositary. 127 Parties have ratified of 197 Parties to the Convention.

On June 1, 2017, President Donald J. Trump announced that the U.S. will withdraw from the Paris Climate Accord and begin negotiations to either re-enter or negotiate an entirely new agreement with more favorable terms for the U.S.

In support of the Paris agreement, the EIB has committed to provide $100 billion of new financing for climate action projects over the five years. The support of multilateral institutions such as EIB is expected to be an important factor in assisting countries in reaching their targets under the Paris Climate Change Agreement.

In November 2015, a group of 20 countries, including the US, UK, France, China and India, pledged to double their budget for renewable energy technology over the next five years as part of a separate initiative called Mission Innovation.

Table of Contents

Also, in November 2015, the Breakthrough Energy Coalition was launched by a group of 28 private investors with the objective of bringing companies with the potential to deliver affordable, reliable and carbon free power from the research lab to the market.

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.

Outside of the U.S., 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 encouraging 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 foreign regions and countries have also adopted active government programs designed to encourage clean renewable energy power generation such as the following countries in which we operate and/or are conducting business development activities:

Europe

Turkey is the fastest growing geothermal market worldwide with the theoretical potential for 31 GW of geothermal capacity and with a proven geothermal capacity of 4.5 GW, according to the Turkish Mineral Technical Exploration Agency.

Since 2004, we have established strong relationships in the Turkish market and provided our full range of solutions including our state-of-the-art binary systems to 28 geothermal power plants with a total capacity of nearly 515 MW, of which 6 power plants are currently under construction.

In Turkey, the 'National Renewable Energy Action Plan' proposes to increase the country's renewable energy generation capacity to 61 GW by 2023, including 1.5 GW of electricity generation from geothermal resources. This plan is supported by the European Bank for Reconstruction and Development. The plan aims to increase Turkish energy security by diversifying its energy supply, making greater use of domestic resources, protecting the environment by relying on clean, renewable and low carbon technologies and fostering energy market efficiency through private sector investment and integration.

The plan also seeks to attract private investments in research and development and in geothermal exploitation for electricity production and to provide financial support to innovation and technology research in the field of renewable energy. Special emphasis and attention has been placed on using locally manufactured equipment in renewable energy based generating facilities, with a target set for the amount of major and critical equipment that is manufactured locally to be used in such facilities by the end of 2019.

To achieve its objective of having 30% of its power generated from renewable sources by 2023, Turkey has changed its renewable energy law first enacted in 2007. The law sets the feed-in-tariff (FIT) for electricity generated from geothermal resources at $105 per MWh for ten years from the COD of the relevant project and provides a further incentive of $13 per MWh for local manufacturing of turbine related parts for five years from the COD of the relevant project. This law, as amended, is effective until 2020. Renewable energy producers will also benefit from an 85% discount on transmission costs for 10 years and various priority rights over land usage. In order to benefit from the incentives under the renewable energy law, a renewable energy generation facility must hold a renewable energy resource certificate (the RER Certificate), which is issued by Turkey’s Energy Market Regulatory Authority. An RER certificate is valid for the term of the generation license of the relevant generation company. In addition, and to avoid rights and licenses manipulation, a pre-feasibility license must be issued and paid for upon request to hold a concession. These pre-licenses must be converted into full licenses for developed fields within three years of issuance, or they become void and the license rights may be re-assigned without fee reimbursement.

To address the demand for local production, we established a local subsidiary in Turkey, which has obtained all certifications required to be obtained by a local manufacturer of parts and equipment in accordance with the Turkish legislation described above.

Table of Contents

Latin America

Several Latin American countries have renewable energy programs. In November 2013, the national government of Guatemala, where our Zunil and Amatitlan power plants are located, approved a law creating incentives for power generation from renewable energy sources. These incentives include, 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. Additionally, the Energy Policy 2013-2027 identifies great untapped potential for renewable energy production in Guatemala, including 1,000 MW for geothermal. One of the main objectives of the Energy Policy is to secure a supply of electricity at competitive prices by diversifying the energy mix with an 80% renewable energy share target for 2027.

In **Honduras**, we recently completed the construction of the first geothermal power plant under a BOT agreement. The national government of Honduras approved the Incentives Act (Decree No.70-2007), which provide incentives in the form of tax exemptions for equipment, materials and services related to power generation development based on renewable resources. At the same time, ENEE, the national integrated utility, will buy energy from such projects and offer to pay rates that are above the marginal cost approved by the CNE. Honduras also set a target to reach at least 80% renewable energy production by 2034.

Mexico is the world’s fourth largest producer of geothermal energy. Recent studies suggest an over 9 GW geothermal potential, of which only approximately 12% is already developed. In December 2013, the Mexican Congress passed a constitutional reform in an attempt to increase the participation of private investors in the generation and commercialization of electric energy. This reform affects the electricity market by opening the generation and commercialization of electricity to private companies, transforming Mexico’s Federal Electricity Commission to a for-profit public company, and redefining the functions and attributions of the Ministry of Energy. The secondary legislation that establishes the attributions of the public entities, procurement regulations, and a normative framework for state-owned energy companies was finalized in 2014.

In July 2015, **Mexico** launched round zero and assigned the projects to be developed by Mexico's state-owned utility CFE, with the remainder to be put out to tender to the private sector. Thirteen geothermal areas and five concessions were given by the Mexican Secretariat of Energy to CFE. The government expects to award private companies with concessions for 30 years and exploration permits for up to 150 km^2 for three years. We are in various discussions with local companies to identify attractive geothermal resources and projects.

Caribbean

Many island nations in general and specifically the **Caribbean** nations, depend almost entirely on petroleum to meet their electricity needs. With an average electricity price of approximately $35 per kWh in 2014, the lack of diversified power generation leaves Caribbean nations vulnerable to commodity market volatility, while the lack of new development leaves them reliant on what are believed to be outdated and often unreliable power plants. The larger issue hindering large-scale renewable energy deployments, however, is scale. Caribbean nations have quite significant renewable energy potential, yet most have small demand. The majority of the Caribbean grids are relatively old, with the average diesel generator more than 20 years old. Furthermore, the power supply is relatively inefficient with high system losses. Due to their sizes, each of the Caribbean countries is generally dominated by one local utility and simple market structures where electricity is regulated directly by local governments. Other than in Guadeloupe, where the geothermal power plant that we recently acquired has been operating since 1985, there are no other operating geothermal projects in the Caribbean region. Recently, some deep well drilling exploration was performed on a few islands, but the results of this exploration are still pending. Although few, we believe there are opportunities for us in the Caribbean islands of St. Kitts, Nevis, St. Lucia, Dominica, and Montserrat.

Oceania

In **New Zealand**, where we have been actively providing geothermal power plant solutions since 1988, the government's policies to fight climate change include an unconditional GHG emissions reduction target of between 10% and 20% below 1990 levels by 2020 and a renewable electricity generation target of 90% of New Zealand's total electricity generation by 2025. We continue selling power plant equipment to our New Zealand customers and secured two projects in the last two years.

Table of Contents

South East Asia

Ormat holds a 12.75% equity interest in the Sarulla project in **Indonesia**. The first 110 MW phase commenced commercial operation in March 2017, the second 110 MW phase commenced commercial operation in October 2017, and the third 110 MW phase is currently under construction, with plans to commence commercial operation in the second quarter of 2018.

The **Indonesian** government intends to increase the share of renewable energy sources in the energy mix, aiming to meet a target of 23% of domestic energy demand by 2025. In the IPP sector, certain regulations for geothermal projects have been implemented, providing incentives such as investment tax credits, accelerated depreciation, and pricing guidelines to allow for preferential power prices for generators.

The Indonesian government announced its intention to reduce the country's carbon dioxide emissions by 26% by 2020 at the 2009 United Nations Climate Change Conference in Copenhagen and during 2015 in Paris.

In January 2016, the President of Indonesia issued new presidential regulations (PR No. 4 2016) to accelerate the Indonesian 35 GW Power Generation Program. The regulations introduce a new government guarantee for the development of power projects, which would cover both projects developed by the state-owned utility company, PLN, and those projects developed by PLN in cooperation with IPPs or their subsidiaries. Additionally, a shorter period to obtain necessary permits for development was introduced as well as clarifications that geothermal projects can be developed in high-conservation forest areas (e.g. national parks).

The Indonesian government is planning to revise negative investment regulation. According to Presidential Decree No. 39/2014, the development of geothermal power plants with a capacity of less than 10 MW is closed to foreign ownership. Currently, foreign investors may own up to 95% of power plants with generating capacities greater than 10 MW. The revised regulations will allow foreign investors to own up to 100% of geothermal power plants, with generating capacities greater than 10 MW and up to 67% of geothermal power plants with generating capacities of less than 10 MW.

In late 2016, the Indonesian government attempted to bring the national electricity provision with lower cost and minimized subsidies. In February 2017, the MEMR issued two regulations: No. 10/2017, which regulates the key terms of PPAs and No. 12/2017, which regulates the utilization of renewable energy for the provision of electricity. However, in August 2017, MEMR regulation No. 10/2017 was amended by the regulation MEMR No 49/2017, and regulation MEMR No. 12/2017 was replaced by regulation MEMR No. 50/2017.

Under MEMR No. 50/2017, the tariff policy for geothermal PPAs is mainly determined based on the location of the relevant power plant. For geothermal projects located in Java, Sumatera, Bali and certain other regions that have a local electricity generation cost (the "Local BPP") below or equal to the national average electricity generation cost (the "National BPP"), the tariff will be based on rates negotiated by the developer and PLN.

For geothermal projects located in regions with a Local BPP that is higher than the National BPP, the ceiling tariff is set to the Local BPP.

In addition to project development, we are also pursuing various supply opportunities in Southeast Asia, including several optimization projects.

China

In **China**, where we recently supplied our equipment to one of our clients' geothermal projects, the National Energy Administration adopted the 13th Renewable Energy Development Five Year Plan. The plan was adopted in December 2016 and establishes targets for renewable energy deployment until 2020. Key objectives under the plan include, among others, to increase the share of non-fossil fuel energy in total primary energy consumption to 15% by 2020 and to 20% by 2030, and to increase installed renewable power capacity to 680 GW by 2020.

East Africa

In East Africa the geothermal potential along the Rift Valley is estimated at several thousand MW. The different countries along the Rift Valley are at different stages of development of their respective geothermal potentials.

Table of Contents

In **Kenya**, there are already several geothermal power plants, including the only geothermal IPP in Africa, our 139 MW Olkaria III complex. The Kenyan government has identified the country's untapped geothermal potential as the most suitable indigenous source of electricity and it aspires to reach 5 GW of geothermal power generation by 2030. To attain this goal, GDC was formed to fast track the development of geothermal resources in Kenya. We have a 51% interest in a consortium that signed a PPA for a 35 MW geothermal power plant in the Menengai area.

The Kenyan government is aiming to reach 22.7GW of power generating capacity by 2033, under the Least-Cost Power Development Plan 2013-33 with a target of 42% of such capacity generated from renewable energy sources (including large hydro but excluding solar).

In December 2012, FITs for various technologies were reviewed and the process of negotiating PPAs in Kenya streamlined. Geothermal projects subject to this regime have priority grid access at the cost of the developer. Geothermal projects from 35 MW to 70 MW have a USD $0.088 per kWh (up to 500 MW) FIT.

In 2015, the Departmental Committee of Finance, Planning, and Trade amended the Income Tax Act in view of the 2015 Finance Bill. The amendments include maintaining the enhanced investment deduction of 150% under section 17B and extending the period of deduction of tax losses to over 10 years.

The governments of **Djibouti, Ethiopia, Eritrea, Tanzania, Uganda, Rwanda** and **Zambia** are exploring ways to develop geothermal resources in their countries, mostly through the help of international development organizations such as the World Bank.

In **Ethiopia**, the new Geothermal Law Proclamation 981 became effective in 2016, and supporting regulations are under consideration. We hold rights for four concessions in Ethiopia. We are currently negotiating a power purchase agreement with the local government and we have started initial exploration studies on the secured concessions.

In January 2014, energy ministers and delegates from 19 countries committed to the creation of the Africa Clean Energy Corridor Initiative (Corridor), at a meeting in Abu Dhabi convened by the International Renewable Energy Agency. The Corridor will boost the deployment of renewable energy and aim to help meet Africa’s rising energy demand with clean, indigenous, cost-effective power from sources including hydro, geothermal, biomass, wind and solar.

Other opportunities

Recovered Energy Generation

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 generation will ultimately benefit from the efforts to reduce GHG emissions. For example, in the U.S., 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 built 22 power plants which generate electricity utilizing "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, 18 states currently allow electric utilities to include recovered energy-based power generation in calculating such utilities' compliance with their mandatory or voluntary RPS and/or Energy Efficient Resources Standards. In addition, California modified the Self Generation Incentive Program to allow recovered energy-based power generation to qualify for a per watt incentive.

Table of Contents

In Colorado, Xcel Energy, the largest utility in that state, now offers a $500 per kW incentive for recycled energy projects. This incentive is paid out over 10 years to developers and manufacturers who convert waste heat from stacks and process it into electricity. The tariff details the rates and a methodology for recycled energy projects that wish to take advantage of this incentive.

Recovery of waste heat is also considered “environmentally friendly” in the western Canadian provinces. On November 22, 2015, the Alberta Government released the Clean Leadership Plan that includes (a) phasing out of coal-fired electricity generation by 2030; (b) a commitment to generate 30 percent of Alberta’s electricity from renewable sources by 2030; (c) new financing for energy efficiency; and (d) an economy-wide price on carbon pollution. The plan also mandates that Alberta reduce methane emissions from oil and gas operations by 45% by 2025. In 2016, the Canadian government ratified its commitments in the Paris Agreement, which features a commitment to reduce emissions by 30% from 2005 levels by 2030. The federal government has announced that Canadian provinces must have an emission reduction plan in place or be subject to a federal carbon tax in 2018. This comprehensive set of climate policies, once fully implemented, will encourage the development of renewable energy technologies, including waste heat recovery, in Alberta and other provinces. We believe that Europe and other markets worldwide may offer similar opportunities in recovered energy-based power generation.

In summary, the market for the recovery of waste heat converted into electricity exists either when already available electricity is expensive or where the regulatory environment facilitates construction and marketing of power generated from recovered waste heat. However, such projects tend to be smaller than 9 MW and we expect any growth to be relatively slow and geographically scattered.

New activities under our strategic plan

The traditional grid is undergoing a major disruption. The continued decline in Solar PV prices is impacting renewable energy pricing and the growth in intermittent green energy is generating increasing strains on the grid, mainly in the U.S and Europe. The increasing amount of Solar PV power being supplied to the grid can create situations where a significant amount of power plant capacity must be available to ramp up and down to accommodate Solar PV daily output cycles and variations due to atmospheric conditions. The output from Solar PV power plants can change significantly over short periods of time due to environmental conditions like cloud movement and fog burn off and that can cause instability on the electric grid.

As a result, energy management and specifically electricity storage is becoming a key component of the future grid. In parallel, we see movement of C&I and communities toward direct purchases of electricity and an increased focus on reliability of electricity supply.

Energy Storage

Energy storage systems utilize low cost, surplus, available electricity that enables utilities to optimize the operation of the grid and generators to run closer to full capacity for longer periods of time and operate more efficiently and effectively. With the increasing use of wind and solar energy, the need for storage services such as balancing services, frequency regulation, rapid generation ramping, reactive power, black start and movement of energy from times of excess to times of high demand is becoming more important.

The global energy storage market is still developing, with specific applications and geographies leading the overall market. After a record-breaking year in 2015, the energy battery storage industry is continuing to gain momentum globally. More than 1.6 GW of new deployments (approximately $2.0 billion) were announced worldwide in 2015. Various diversified battery storage technologies have been developed and deployed. According to GTM, total deployed MW in 2016 and 2017 represent continued growth of above 25% per year and forecasts for 2018 and beyond expect greater growth to be achieved as energy storage becomes cheaper and its technologies and markets more mature.

Much of the BESS activity is focused on energy storage for the grid and ancillary services. Behind the meter deployments are growing fast to enable customers to increase savings from demand charge reductions and create revenues through active market participation (demand response programs). Also, grids and utilities are undergoing significant changes such as grid aging, grid congestion, coal retirement, implementation of carbon reduction rules and increasing renewable energy and intermittent energy penetration. BESS delivers many benefits to grids and end users (behind the customer meter, as well as to micro-grids). Real-time balancing services can reactively increase stability and reliability on the grid to offset renewables inherent flexibility, to store energy now to be used later and to promote business resiliency, power quality and physically distributed benefits for all segments of the grid or the end customer.

Table of Contents

According to Navigant research, BESS continues to be one of the fastest growing segments of the broader energy industry, set to reach an overall installed power capacity of 143.7 GW and a cumulative global market size of $162.3 billion in the next 10-year period. This represents a CAGR of approximately 30% over the 10-year period in both in-front-of-the meter grid connected and behind-the-meter C&I deployments.

According to a GTM report from December 2016, the U.S. behind-the-meter energy storage market today is small, with combined residential and non-residential deployments in 2015 accounting for only 15% of installed capacity in MW terms. By 2021, however, the behind-the-meter segment is expected to account for half of the annual U.S. market, driven by many factors including improved system economics, net-energy metering reform, changes to utility rate structures, increasing viability of demand-charge management for non-residential customers, and increased interest in reliability and resiliency. GTM is expecting total installations of more than 4 GW through 2021 in the U.S. These trends in the U.S. market are expected to be experienced in other leading global markets in Europe and Asia.

We plan to use our Viridity platform and services to expand our market presence in the energy storage market and further develop our VPower™ software platform to be utilized in optimizing and generating revenues from demand response including ownership and supply of BESS systems. We expect that the eco system we have created, combining our Viridity business's capabilities with our global presence, experience in technology and system integration, EPC capabilities, flexible business models and reputation and experience in the geothermal and recovered energy sectors, will enable us to expand into this growing sector.

C&I

The C&I sector is shifting from centralized electricity generation systems to distributed resources supported by emerging models of direct PPAs with renewable power plants, on-site deployments, and customized solutions for energy management. Participants in the C&I sector are motivated to purchase renewable energy to reduce costs and diversify their energy supply, to lock in long-term energy price stability and carbon footprint reductions, to achieve renewable energy targets and to demonstrate leadership, innovation, and competitive first mover advantages. We see C&I customers as a natural expansion of our customer base from regulated utilities to medium and large C&I customers desiring to contract for renewable energy.

The advances in electricity storage technology together with high period demand charges, demand response programs, concern over electricity supply reliability and more aggressive goals for renewable energy content than those of centralized electricity suppliers are all factors that have supported the growth of the C&I market. The need for technical customized solutions to meet these varied C&I needs fits well with our Viridity business and our experience in providing customized geothermal and REG solutions to various customers around the world.

Solar PV

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 with the potential to develop Solar PV power plants in locations where we can offer competitively priced power generation. Our focus currently is in installing Solar PV systems in some of our operating geothermal power plants to reduce internal consumption loads. We are planning to install the first system in Tungsten Mountain. In addition, we are looking for hybrid projects that involve intermittent power (such as Solar PV) and energy storage.

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 with an average remaining life of approximately 18 years.

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 with a 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 provide baseload capacity because of their intermittent nature. It remains to be seen whether developments in the energy storage markets will erode this competitive advantage.

Ancillary Services. Geothermal power plants positively impact electrical grid stability and provide valuable ancillary services. Because of the baseload nature of their output, they have high transmission utilization efficiency, provide capacity, provide grid inertia and reduce the need for ancillary services such as voltage regulation, reserves and flexible capacity. Other intermittent renewables create integration costs, representing a significant value proposition for geothermal energy.

Table of Contents

Competitive Pricing. Geothermal power plants, while site specific, are economically feasible 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 in many places around the world. Geothermal energy is recognized as one of the lower cost sources of energy from a LCOE perspective.

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. We plan to evaluate various alternatives for financing the expansion of our business as we further develop and implement our new strategic plan.

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.

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 communication among our subsidiaries that design and manufacture 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 operation that currently owns seven 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.

Technological Innovation. We have 77 U.S. patents in force (and have approximately 9 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.

Table of Contents

Business Strategy

Our strategy is to continue building a geographically balanced portfolio of geothermal and recovered energy assets, and to continue to be a leader in the geothermal energy market with the objective of becoming a leading global provider of renewable energy. Since 2015, we have implemented a number of the elements of a new multi-year strategic plan. We expect the plan to evolve over time in response to market conditions and other factors. 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.

- *Expanding our Geographical Reach* — increasing our business development activities in an effort to grow our business in the global markets in both business segments. While we continue to evaluate global opportunities, we currently see Turkey, New Zealand, Chile, Kenya, Honduras, China, Indonesia and Ethiopia as very attractive markets for us. We are actively looking at ways to expand our presence in those countries.

- *Acquisition of New Assets* — expanding and accelerating growth through acquisition activities globally, aiming to acquire from third parties additional geothermal assets, such as our recent announcement that we signed an agreement to acquire U.S. Geothermal Inc., which owns approximately 38 MW of operating power plants, and companies and assets that we expect to expedite our entry into the storage and C&I markets, such as our March 2017 acquisition of substantially all of the assets that comprise our Viridity business today.

- *Manufacturing and Providing Products and EPC Services 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.

- *Expanding into New Technologies* – leveraging our technological capabilities over a variety of renewable energy platforms, including solar power generation and energy storage. Initially, however, we expect that our primary focus will be on expanding our core geothermal competencies to provide high efficiency solutions for high enthalpy applications by utilizing our binary enhanced cycle and technology, as well as, expanding into steam geothermal generation equipment and facilities. We may acquire companies with integration and technological capabilities we do not currently have, or develop new technology ourselves, where we can effectively leverage our expertise to implement this part of our strategic plan.

- *Expand our Customer Base* — evaluating a number of strategies for expanding our customer base to the C&I market. In the near term, however, we expect that a majority of our revenues will continue to be generated as they now are, with our traditional electrical utility customer base for the Electricity segment.

- *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.

- *Cost Saving by Increasing Efficiencies* — increasing efficiencies in our operating power plants and manufacturing facility including procurement by adding new technologies, restructuring of management control, automating part of our manufacturing work and centralizing our operating power plants.

- *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.

Table of Contents

Recent Developments

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

On January 24, 2018, we announced that we entered into a definitive agreement to acquire U.S. Geothermal Inc. (NYSE American: HTM), a renewable energy company focused on the development, production and sale of electricity from geothermal energy. Under the terms of the merger agreement, holders of U.S. Geothermal common stock will receive $5.45 per share in cash. On a fully diluted basis, including payment to U.S. Geothermal's option holders, we expect to pay total consideration of approximately $109.9 million from our corporate funds. The closing of the merger is subject to customary conditions, including receipt of regulatory approvals and approval by holders of a majority of the outstanding shares of US Geothermal's common stock. The transaction is expected to close in the second quarter of 2018.

U.S. Geothermal is currently operating geothermal power projects at Neal Hot Springs, Oregon, San Emidio, Nevada and Raft River, Idaho for a total designed net output of 45 MW that currently generate approximately 38 MW net. In addition, U.S. Geothermal is developing additional projects at the Geysers, California; a second phase project at San Emidio, Nevada; at Crescent Valley, Nevada; and the El Ceibillo project located near Guatemala City, Guatemala.

On December 13, 2017, we announced that the 24 MW Tungsten Mountain geothermal power plant located in Churchill County, Nevada, commenced commercial operation on December 1, 2017. The Tungsten Mountain power plant will sell its power under the 26-year PPA, dated as of October 20, 2016, between our wholly owned subsidiary ONGP, LLC and SCPPA (ONGP Portfolio PPA), which was announced in June 2017. SCPPA resells the entire output of the plant to LADWP. The power plant is expected to generate approximately $15 million in average annual revenue. The Tungsten Mountain geothermal power plant utilizes our latest turbine design and contains the largest OEC ever installed. The new and innovative turbine design will increase the OEC's efficiency, capacity and availability.

On December 13, 2017, we announced that we signed an approximately $50 million EPC contract, with TOP ENERGY Ltd for the Ngawha extension geothermal project located in Ngawha, New Zealand. The project is expected to be completed in the first quarter of 2021. Under the EPC contract, we will provide our air-cooled OEC for the Ngawha extension project. This is the third EPC contract Ormat has signed with TOP ENERGY Ltd. The first was for the Ngawha I power plant in 1998 and the second for the Ngawha II power plant in 2008.

On October 10, 2017, we announced that the second unit of the Sarulla geothermal power plant located in the North Sumatra region of Indonesia, one of the world's largest geothermal power plants, commenced commercial operation. The Sarulla power plant includes three units of approximately 110 MW each, utilizing both steam and brine extracted from the geothermal field to increase the power plant's efficiency. The first unit of the power plant commenced commercial operation on March 17, 2017 and we expect the third unit to commence commercial operation in 2018. The Sarulla power plant is operated by Sarulla Operations Ltd. (SOL), a consortium consisting of Medco Energi Internasional Tbk, Inpex Corporation, Itochu Corporation, Kyushu Electric Power Co. Inc., and our subsidiary that

holds a 12.75% equity interest in SOL.

On September 26, 2017, we announced that the 35 MW Platanares geothermal project in Honduras commenced commercial operation. We had previously signed a BOT contract for the Platanares geothermal project in Honduras with ELCOSA, a privately-owned Honduran energy company, for 15 years from COD. The Platanares power plant sells its power under a 30-year PPA with ENEE. We hold a portion of the land on which the power plant is located through a lease from a local municipality. Because the term of the lease exceeds the term in office of the relevant municipal government, the lease remains subject to the additional approval of the Honduran Congress in order to be fully valid. We have commenced the necessary steps to obtain such approval but the current elections in Honduras may result in a delay in obtaining such approval. The project is expected to generate average annual revenue of approximately $33 million.

On July 26, 2017, we announced that ORIX closed its acquisition of approximately 11 million shares of our common stock, representing an approximately 22% ownership stake in the Company, from FIMI ENRG Limited Partnership, FIMI ENRG, L.P., Bronicki Investments, Ltd. and certain senior members of our management team pursuant to a stock purchase agreement entered into by ORIX and the selling stockholders on May 4, 2017. In connection with the acquisition, on May 4, 2017, we entered into certain related agreements with ORIX, including a governance agreement (Governance Agreement), a commercial cooperation agreement (CCA) and a registration rights agreement (RRA), following the unanimous recommendation of a special committee of our Board that was formed to evaluate and negotiate the stockholder arrangements proposed by ORIX, and following approval by the full Board. The foregoing agreements between us and ORIX became effective on July 26, 2017.

Table of Contents

Under the Governance Agreement, ORIX has the right to designate three persons to our Board, which was expanded to nine directors, and propose a fourth person to be mutually agreed by the Company and ORIX to serve as a new independent director on our Board. In addition, for so long as ORIX is entitled to Board representation pursuant to the Governance Agreement, ORIX will be subject to certain customary standstill restrictions, including an effective 25% cap on its voting rights. Pursuant to the RRA, ORIX also has certain customary registration rights with respect to the shares of our common stock that it owns.

Under the CCA, we have exclusive rights to develop, own, operate and provide equipment for ORIX geothermal energy projects in all markets outside of Japan. In addition, we have certain rights to serve as technical partner and co-invest in ORIX geothermal energy projects in Japan. ORIX will also assist us in obtaining project financing for our geothermal projects from a variety of leading providers of renewable energy debt financing with which ORIX has relationships in Asia and around the world.

On June 1, 2017, we announced that SCPPA received the final necessary approval from the City of Los Angeles that enabled SCPPA to execute the ONGP Portfolio PPA. Under the ONGP Portfolio PPA, SCPPA will purchase 150 MW of power generated by a portfolio of our new and existing geothermal power plants. Energy deliveries under the ONGP Portfolio PPA started in the fourth quarter of 2017 and the entire portfolio of geothermal power plants is expected to be online by the end of 2022. The ONGP Portfolio PPA contract capacity is 150 MW, with a minimum delivery requirement of 135 MW and a permitted maximum delivery of 185 MW. The ONGP Portfolio PPA is for a term of approximately 26 years, expiring in December 31, 2043, and has a fixed price of $75.50 per MWh with no escalation.

The ONGP Portfolio PPA covers nine of our primary geothermal power plants, including new projects currently under construction or development, as well as existing geothermal power plants that will commence energy deliveries to SCPPA once their current PPAs terminate. The ONGP Portfolio PPA also covers sixteen secondary facilities that could be used to replace or supplement the primary facilities.

On March 15, 2017, we announced that we completed the acquisition of our Viridity business. At closing, we paid initial consideration of $35.3 million. Additional contingent consideration may be payable upon the achievement of certain performance milestones measured at the end of fiscal year 2020. This transaction marked our entry into the growing energy storage and demand response markets, with an established North American presence.

In February 2017, we began construction to expand the Olkaria III complex in Kenya by an additional 10 MW and increase the complex’s generating capacity to up to 150 MW during 2018.

Operations of our Electricity Segment

How We Own Our Power Plants. We customarily establish a separate subsidiary to own interests in each of our power plants. This ensures that the power 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 construction or acquisition) of the relevant power 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 interests 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 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, initially in the U.S. and in the last few years with an increasing focus internationally. It normally takes 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. Exploration activities generally involve the phases described below.

Initial Evaluation. Identifying and evaluating potential geothermal resources by sampling and studying new areas combined with information available from public and private sources. We generally adhere to the following process, although our process can vary from site to site depending on geological circumstances and prior evaluation:

- We evaluate historic, geologic and geothermal information available from public and private databases, including geothermal, mining, petroleum and academic sources.

Table of Contents

- We visit sites, sampling fluids for chemistry if necessary, to evaluate geologic conditions.

- We evaluate available data, and rank prospects in a database according to estimated size and perceived risk. For example, pre-drilled sites with extensive data are considered lower risk than "green field" sites. Both prospect types are considered critical for our continued growth.

- We generally create a digital, spatial geographic information systems (GIS) database and 3D geologic model containing all pertinent information, including thermal water temperature gradients derived from historic drilling, geologic mapping information (e.g., formations, structure, alteration, 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 range from approximately $10,000 to $50,000 including travel, chemical analyses, and data acquisition.

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

Land Acquisition. Acquiring land rights to any geothermal resources our initial evaluation indicates could potentially support a commercially viable power plant, taking into account various factors. 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 power 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 an option agreement 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 first obtain the exploration license and once certain investment requirements are met, we can obtain the geothermal 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 U.S. 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 the 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 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 on, among other things, current market conditions.

Surveys. Conducting geological, geochemical, and/or geophysical surveys on the sites acquired. Following the acquisition of land rights for a potential geothermal resource, we conduct additional surface water analyses, soil surveys, and geologic mapping to determine proximity to possible heat flow anomalies and up-flow/permeable zones. We augment our digital database with the results of those analyses and create conceptual and digital geologic models to describe geothermal system controls. We then initiate a suite of geophysical surveys (e.g., gravity, magnetics, resistivity, magnetotellurics, reflection seismic, LiDAR, and spectral surveys) to assess surface and sub-surface structure (e.g., faults and fractures) and improve the geologic model of fluid-flow conduits and permeability controls. All pertinent geological and geophysical data are used to create three-dimensional geologic models to identify drill locations. These surveys are conducted incrementally considering relative impact and cost, and the geologic model is updated continuously.

Table of Contents

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 surveys estimating temperature and the overall geologic model, including potential resource size. If the results from the geochemical surveys are poor (i.e., low derived resource temperatures or poor permeability) or the geologic model indicates small or deep resource, we re-evaluate the commercial viability of the geothermal resource and may not proceed to exploratory drilling. We generally only move forward with those sites that we believe have a high probability of successful development.

Exploratory Drilling. Drilling one or more exploratory wells on the high priority, relatively low risk sites to confirm and/or define the geothermal resource. If we proceed to exploratory drilling, we generally use outside contractors to create access roads to drilling sites and related activities. We have continued 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, whenever possible, or outside contractors. 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. If the core hole indicates low temperatures or does not support the geologic model of anticipated permeability, it may be plugged, and the area reclaimed. In undrilled sites, we typically step up from shallow (500-1000 feet) to deeper (2000-4000 feet) wells as confidence improves. Following proven temperature in core wells, we typically move to slim and/or full- size wells to quantify permeability.

Each year we determine and approve an exploration budget for the entire exploration activity in such year. We prioritize budget allocation between the various geothermal sites based on commercial and geological factors. 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. However, on average, exploration costs, prior to drilling of a full-size well are approximately $1.0 million to $3.0 million for each site, not including land acquisition. However, we only reach such spending levels for sites that proved to be successful in the early stages of exploration.

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 data and interpretations 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. The MW capacity can be estimated using analogous systems and/or quantitative heat in place estimates until results from drilling and flow tests quantify temperature, permeability, and resulting resource size.

- Current and expected market conditions and rates for contracted and merchant electric power in the market(s) to be serviced.

- Availability of transmission capacity.

- Anticipated costs associated with further exploration activities and the relative risk of failure.

- 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.

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

- Drilling production and injection wells.

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

Table of Contents

- Obtaining any required permits, electrical interconnection and transmission agreements.

- 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.

In recent years, it takes approximately three years from the time we drill a production well, until the power plant becomes operational.

Drilling Production and Injection Wells. We consider completing the drilling of the first production well to be the beginning of our construction phase for a power plant. However, this is not always sufficient for a full release for construction. The number of production wells varies from plant to plant depending on, among other things, 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 through injection wells to maintain the geothermal resource and surface conditions. We generally drill the wells ourselves although in some cases we use outside contractors.

The cost for each production and injection well varies depending on, among other things, the depth and size of the well and market conditions affecting the supply and demand for drilling equipment, labor and operators. In the last five years, our typical cost for each production and injection well is approximately $3.3 million with a range of $1.0 million to $13.0 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 fiscal year 2017, in the Electricity segment, we focused on the commencement of operations at Platanares power plant in Honduras and Tungsten Mountain in Nevada. We began with construction of the Olkaria III plant expansion in Kenya and enhancement work in some of our operating power plants. During fiscal year 2016, we focused on the commencement of operations at Olkaria III plant 4. During fiscal year 2015, we focused on the commencement of operations at the McGinness Hills phase 2 and the Don A. Campbell phase 2 power plants. We continued with construction of Olkaria III plant 4.

When deciding whether to continue holding lease rights and/or to pursue exploration activity, we diligently prioritize our prospective investments, taking into account resource and probability assessments in order to make informed decisions about whether a particular project will support commercial operation. As a result, during fiscal year 2017 we discontinued exploration activities at four prospective sites: the Ungaran region in Indonesia, Glass Buttes - Midnight Point in Oregon and Tuscarora - phase 2 and Don A. Campbell - phase 3, in Nevada. During fiscal year 2016, we discontinued exploration activities at three future prospective sites, in the Kula region in Hawaii and the Aqua Quieta and Sollipulli regions in Chile. During fiscal year 2015, we discontinued exploration and development activities at ten future prospects, including Kona and Ulupalakua (Maui) in Hawaii, Warm Springs Tribe and Newberry - Twilight in Oregon, Whirlwind Valley in Utah, Argenta, Hycroft and South Jersey in Nevada and Mariman and Quinohuen in Chile.

After conducting exploratory studies at those sites, we concluded that the respective geothermal resources would not support commercial operations. Costs associated with exploration activities at these sites were expensed accordingly (see “Write-off of Unsuccessful Exploration Activities” under Item 7 — “Management’s Discussion and Analysis of Financial Condition and Results of Operations”).

Table of Contents

We added to our exploration inventory two prospective sites in 2017 and ten prospective sites in each of the years ended December 31, 2016 and 2015.

How We Operate and Maintain Our Power Plants. In the U.S., our wholly owned subsidiary, Ormat Nevada, usually acts as the 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 or electric cooperatives including public owned utilities. Outside of the U.S., 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, PPAs) for the sale of electricity or the conversion of geothermal resources into electricity. Although previously our power plants' revenues under a PPA 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 kWh, 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, we have six domestic power plants located in California, Nevada and Hawaii that are eligible for capacity bonus payments under the respective PPAs upon reaching certain levels of generation, or subject to a capacity payment reduction if certain levels of generation are not reached.

How We Finance Our Power Plants. Historically we have funded our power plants with different sources of liquidity such as a non-recourse or limited recourse debt, lease financing, tax monetization transactions, internally generated cash, which includes funds from operation, as well as proceeds from loans under corporate credit facilities and the sale of equity interests and other securities. 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 our power plant subsidiaries to us are contingent on compliance with financial and other covenants contained in the applicable 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 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 DSCR and certain other conditions, available funds may be disbursed for management fees or dividends or, where there are subordinated lenders, for the payment of subordinated debt service.

Table of Contents

In the event of a foreclosure after a default, our affiliate that owns the power plant would only retain an interest in the power plant 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 equity 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. Creditors of a project financing of a particular power plant may have direct recourse to us to the extent of these limited recourse obligations.

We have used financing structures to monetize PTCs and depreciation, such as our recent tax equity partnership transaction involving Opal Geo, and an operating lease arrangement for our Puna complex power plants.

We have also used a sale of equity interests in two of our geothermal assets and nine of our REG facilities to fund corporate needs including funding for the construction of new projects. We may use of the same financing structure in the future.

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 policies are with 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 losses resulting from specified governmental actions or responses thereto, 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 the Olkaria, Zunil, Amatitlan, Platanares and Sarulla projects.

Description of Our Leases and Lands

We have domestic leases on approximately 320,500 acres of federal, state, and private land in California, Hawaii, Nevada, New Mexico, Utah and Oregon. The approximate breakdown between federal, state and private leases and owned land is as follows:

- 85% of the acreage under our control is leased from the U.S. government, acting mainly through the BLM;
- 11% is leased or subleased from private landowners and/or leaseholders;
- 2% is owned by us; and
- the balance is leased from various states, none of which is currently material.

Each of the leases within each of the categories above has standard terms and requirements, as summarized below. Internationally, our land position includes approximately 122,500 acres, most of which are for geothermal prospects in Honduras.

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.

Table of Contents

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 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.

Table of Contents

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 geothermal fluid 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.

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.

Table of Contents

Description of Our Power Plants

Domestic Operating Power Plants

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

Brady Complex

Location	Churchill County, Nevada
Generating Capacity	18 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 nine injection wells are connected to the plants through a gathering system.
Major Equipment	Three OECs and three steam turbines along with the Balance of Plant equipment.
Age	The Brady power plant commenced commercial operation in 1992 and a new OEC was added in 2004. The Desert Peak 2 power plant commenced commercial operation in 2007.
Land and Mineral Rights	The Brady complex is comprised mainly of BLM leases that 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 in the Brady complex. 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 rights of way from the BLM and from a private owner that allows access to and from the plant.
Resource Information	The resource temperatures at the Brady and Desert Peak 2 power plants are 270 degrees Fahrenheit and 338 degrees Fahrenheit, respectively. 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 north-northeast-trending band of hot ground that extends 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 north-northeast-trending folds. The geologic structure in the area is dominated by high-angle normal faults of varying displacement.
Resource Cooling	During the last three years the cooling at the Brady power plant has levelled off to a rate of one degree Fahrenheit per year. The temperature decline at the Desert Peak 2 power plant is approximately two degrees Fahrenheit per year.
Sources of Makeup Water	Condensed steam is used for makeup water.
Power Purchaser	The Sierra Pacific Power Company and Nevada Power Company purchase power generated by the Brady power plant and Desert Peak 2 power plant, respectively.
PPA Expiration Date	Brady power plant — 2022. Desert Peak 2 power plant — 2027.
Financing	The prior financing transactions covering the Brady complex have been fully paid off.
Supplemental Information	We are currently in the process of enhancing the Brady power plant. We are replacing its equipment with new OECs, following which we expect the capacity of the complex to increase by 4 MW to approximately 22 MW. Engineering and manufacturing have been completed, and transportation and construction are ongoing. We expect the enhancement to be completed in the first half of 2018.

Table of Contents

Brawley Complex

Location	Imperial County, California
Generating Capacity	13 MW (See supplemental information below)
Number of Power Plants	One
Technology	The Brawley power plant utilizes a water-cooled binary system.
Subsurface Improvements	36 wells have been drilled and are connected to the Brawley power plant through its gathering system. As we improved our knowledge of the geothermal resource, we changed some of the wells from production to injection (and vice versa) and left others idle. Currently, we have 13 wells connected to the production header and 23 wells, connected to the injection header.
Major Equipment	Five OECs together with the Balance of Plant equipment.
Age	The Brawley power plant commenced commercial operation on March 31, 2011.
Land and Mineral Rights	The Brawley area is comprised entirely 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	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 (from depths of 1,500 to 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 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 Brawley power plant. The average produced fluid resource temperature is 310 degrees Fahrenheit.
Resource Cooling	The temperature of the geothermal resource depends on the mix of operating production wells that we use.

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	We are currently selling the power generated by the Brawley complex to Southern California Edison under an existing PPA at a capacity level of approximately 8 MW and we are planning to increase this level to 11 MW by the end of 2018 and further thereafter. With a new chemical supply system, we plan to activate several idle wells and we recently drilled a well in eastern Brawley and connected it to the power plant. As a result, we expect to see an increase in generation.

Table of Contents

Don A. Campbell Complex

Location	Mineral County, Nevada
Generating Capacity	41 MW
Number of Power Plants	Two (phase 1 and phase 2)
Technology	The Don A. Campbell power plants utilize an air-cooled binary system.
Subsurface Improvements	Nine production wells and five injection wells are connected to the plants.
Material Equipment	Two air-cooled OECs with the Balance of Plant equipment.
Age	The phase 1 power plant commenced commercial operation on January 1, 2014 and the phase 2 power plant commenced commercial operation on September 27, 2015.
Land and Mineral Rights	The Don A. Campbell area is comprised of BLM leases. 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".
Resource Information	The Don A. Campbell geothermal reservoir consists of highly fractured, silicified alluvium over at least two square miles. Production and injection are very shallow with nine pumped production wells (from depths of 1,350 feet to 1,900 feet) and five injection wells (from depths of 649 feet to 2,477 feet), all targeting northwest-dipping fractures. The thermal fluids are thought to be controlled by a combination of conductive heat transfer from deeper bedrock and through mixing of upwelling thermal fluids from a deeper geothermal system also contained in the bedrock. The system is considered blind with no surface expression of thermal features. The temperature of the resource is approximately 254 degrees Fahrenheit.
Resource Cooling	Temperature started declining in mid-2016. An injection well was drilled in 2017 and testing is in process to confirm the impact on temperature decline. Injection tests and tracer studies, along with reservoir modeling, will further develop a plan to mitigate temperature decline of the reservoir.
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	Two separate PPAs with SCPPA.

PPA Expiration Date	The phase 1 PPA expires in 2034 and the phase 2 PPA expires in 2036
Financing	The phase 1 power plant was financed through our sale of our 4.03% Senior Secured Notes and a cash grant that we received from the U.S. Treasury. The phase 2 power plant was financed using corporate funds and the proceeds of the tax equity transaction involving Opal Geo.
Supplemental Information	In April 2015, we closed an equity transaction with Northleaf in which Northleaf acquired a 36.75% equity interest in ORPD. ORPD owns the Puna complex, the Don A. Campbell phase 1 power plant, and the OREG 1, OREG 2, and OREG 3 power plants. In November 2016, Northleaf purchased a 36.75% equity interest in the Don A. Campbell phase 2 power plant, which was initially added to the existing ORPD portfolio and then later contributed to Opal Geo, which is indirectly owned by ORPD, in connection with the tax equity partnership transaction as described below.

Table of Contents

Heber Complex

Location	Heber, Imperial County, California
Generating Capacity	89 MW
Number of Power Plants	Five (Heber 1, Heber 2, Heber South, Gould 1 and Gould 2).
Technology	The Heber 1 plant utilizes a dual flash system and a binary bottoming unit called Gould 1 and the Heber 2, Gould 2 and Heber South plants all utilize binary systems. The complex uses a water cooled system.
Subsurface Improvements	27 production wells and 38 injection wells connected to the plants through a gathering system.
Major Equipment	17 OECs and one steam turbine with the Balance of Plant equipment.
Age	The Heber 1 plant, Heber 2, Heber South, Gould 1 and Gould 2 plants commenced commercial operation in 1985, 1993, 2008, 2006 and 2005, respectively.
Land and Mineral Rights	The Heber complex is comprised mainly of 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 341 degrees Fahrenheit. The resource supplying the pumped Heber 2 wells averages 316 degrees Fahrenheit. The Heber complex's 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	Average cooling of 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	One PPA with Southern California Edison and two PPAs with SCPPA.

Table of Contents

PPA Expiration Date	Heber 1 — 2025, Heber 2 — 2023, and Heber South — 2031. The output from the Gould 1 and Gould 2 power plants is sold under the PPAs with SCPPA.
Financing	The Heber complex was financed through the sale of OrCal Senior Secured Notes and the proceeds of the transaction involving our subsidiary ORTP described below
Supplemental Information	We are currently in the process of enhancing the Heber 1 power plant. We are planning to convert artesian wells to pumped wells, add a new water cooling unit and replace one of the OECs, following which we expect the capacity of the complex to reach 89 MW. Construction is ongoing and completion of the enhancement is expected in the first quarter of 2018.

Jersey Valley Power Plant

Location	Pershing County, Nevada
Generating Capacity	10 MW
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. A third production well is not connected to the power plant and will be used in the future as required.
Major Equipment	Two OECs 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 under the PPA on August 30, 2011.
Land and Mineral Rights	The Jersey Valley site 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 are provided 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 310 degrees Fahrenheit.

Resource Cooling	The rate of cooling was four degrees Fahrenheit in 2015, but we have moderated such cooling by reducing the injection rate in a well near the production wells. To offset the reduction of injection in this well, we diverted more fluid to farther away wells (by increasing injection pressure).
Power Purchaser	Nevada Power Company
PPA Expiration Date	2032

Table of Contents

Financing	The Jersey Valley power plant was financed through the sale of our OFC 2 Senior Secured Notes, corporate funds, an ITC cash grant from the U.S. Treasury and the proceeds of the Opal Geo tax equity partnership transaction.

Mammoth Complex

Location	Mammoth Lakes, California
Generating Capacity	29 MW
Number of Power Plants	Three (G-1, G-2, and G-3).
Technology	The Mammoth complex utilizes air cooled binary systems.
Subsurface Improvements	Ten production wells and five injection wells are connected to the plants through a gathering system.
Major Equipment	Two new OECs and six turbo-expanders together with the Balance of Plant equipment.
Age	The G-1 plant commenced commercial operation in 1984 and the G-2 and G-3 power plants commenced commercial operation in 1990. We recently replaced the equipment at the G-1 plant with new OECs.
Land and Mineral Rights	The Mammoth complex 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".
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 minimal scaling potential.

Resource Cooling	In the last three years the temperature has stabilized and there has been no notable decline.
Power Purchaser	G1 and G3 plants — PG&E and G2 plant — Southern California Edison.
PPA Expiration Date	G-1 and G-3 plants — 2034 and G-2 plant — 2027.
Financing	The prior financing transactions covering the Mammoth complex have been fully paid off.

McGinness Hills Complex

Location	Lander County, Nevada
Generating Capacity	90 MW
Number of Power Plants	Two (first phase and second phase)

Table of Contents

Technology	The McGinness Hills complex utilizes an air cooled binary system.
Subsurface Improvements	Ten production wells and six injection wells are connected to the power plant.
Material Equipment	Six air cooled OECs with the Balance of Plant equipment.
Age	The first phase power plant commenced commercial operation on July 1, 2012, and the second phase power plant commenced commercial operation on February 1, 2015.
Land and Mineral Rights	The McGinness Hills complex is comprised of private and BLM leases.
	The leases require 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 Hills 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 Hills, 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 335 degrees Fahrenheit and the fluids are sourced from the reservoir between 2,000 and 5,000 feet below the surface.
Resource Cooling	The temperature has been stable with no notable cooling since the first phase power plant began operation.
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	The power plants were financed through the sale of our OFC 2 Senior Secured Notes, an ITC cash grant from the U.S. Treasury for the first phase power plant and the proceeds of the Opal Geo tax equity partnership transaction.

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 OECs.
Major Equipment	Four WHOH and four OECs together with the Balance of Plant equipment.
Age	The OREG 1 power plant commenced commercial operation in 2006.
Land	Easement from NBPL.
Access to Property	Direct access to the plant from public roads.
Power Purchaser	Basin Electric Power Cooperative

Table of Contents

PPA Expiration Date	2031
Financing	Corporate funds.
Supplemental Information	In April 2015, we closed an equity transaction with Northleaf in which Northleaf acquired a 36.75% equity interest in ORPD, which has a direct ownership interest in the Puna complex, the Don A. Campbell phase 1 power plant, the OREG 1, OREG 2, and OREG 3 power plants as well as an indirect ownership interest in the Don A. Campbell phase 2 power plant.

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 OECs.
Major Equipment	Four WHOH and four OECs together with the Balance of Plant equipment.
Age	The OREG 2 power plant commenced commercial operation 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.
Supplemental Information	In April 2015, we closed an equity transaction with Northleaf in which Northleaf acquired a 36.75% equity interest in ORPD, which has a direct ownership interest in the Puna complex, the Don A. Campbell phase 1 power plant, the OREG 1, OREG 2, and OREG 3 power plants as well as an indirect ownership interest in the Don A. Campbell phase 2 power plant.

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 OECs.
Major Equipment	One WHOH and one OEC along with the Balance of Plant equipment.
Age	The OREG 3 power plant commenced commercial operation during 2010.
Land	Easement from NBPL.
Access to Property	Direct access to the plant from public roads.
Power Purchaser	Great River Energy
PPA Expiration Date	2029
Financing	Corporate funds.
Supplemental Information	In April 2015, we closed an equity transaction with Northleaf in which Northleaf acquired a 36.75% equity interest in ORPD, which has a direct ownership interest in the Puna complex, the Don A. Campbell phase 1 power plant, the OREG 1, OREG 2, and OREG 3 power plants as well as an indirect ownership interest in the Don A. Campbell phase 2 power plant.

Table of Contents

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 OECs.
Major Equipment	Two WHOH and one OEC together with the Balance of Plant equipment.
Age	The OREG 4 power plant commenced commercial operation 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.

Ormesa Complex

Location	East Mesa, Imperial County, California
Generating Capacity	40 MW
Number of Power Plants	Three (OG I, OG II and GEM 3). The GEM 2 plant was taken off line during 2015 due to plant operation optimization.
Technology	The OG I and OG II plants utilize a binary system and the GEM 3 plant utilizes a flash system. The complex uses a water cooling system.
Subsurface Improvements	24 production wells and 57 injection wells connected to the plants through a gathering system.
Material Major Equipment	8 OECs and one steam turbine with the Balance of Plant equipment.

Age	The various OG I plants commenced commercial operation 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 plant commenced commercial operation in 1989, and a new bottoming unit was added in 2007.
Land and Mineral Rights	The Ormesa complex 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 ranges from 280 degrees Fahrenheit to 343 degrees Fahrenheit depending on which production wells are used. Production is from sandstones. Productive sandstones are from 1,800 to 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.

Table of Contents

Resource Cooling	In the last year, the temperature has declined by one degree Fahrenheit.
Sources of Makeup Water	Water is provided by the IID.
Power Purchaser	SCPPA under a single PPA.
PPA Expiration Date	November 30, 2042.
Financing	The prior financing transactions covering the Mammoth complex have been fully paid off.
Supplemental Information	On November 30, 2017 we started to sell the electricity generated by the Ormesa complex power plants under a 25-year PPA with SCPPA. This PPA replaced the 30-year SO#4 contract with Southern California Edison. Under the terms of the new PPA, energy from the power plant is sold to SCPPA at a rate of $77.25 per MWh with no annual escalation. Contract capacity is 35 MW with a maximum generation equivalent to a net capacity of about 43 MW.

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	Six production wells and five injection wells connected to the plants through a gathering system.
Major Equipment	The first plant consists of ten OECs 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 OECs along with Balance of Plant equipment.
Age	The first plant commenced commercial operation in 1993. The second plant was placed in service in 2011 and commenced commercial operation in 2012.
Land and Mineral Rights	The Puna complex is comprised of a private lease. The private lease is between PGV and KLP and it expires in 2046. PGV pays an 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 three percent 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.

Table of Contents

	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.
Power Purchaser	Three PPAs with HELCO (see “Supplemental Information” below).
PPA Expiration Date	2027
Financing	The Puna complex was financed through an operating lease, an ITC cash grant from the U.S. Treasury and the proceeds of the Northleaf transaction described above.
Supplemental Information	Energy pricing under the PPA with HELCO is**:**

- For the first on-peak 25 MW, based on HELCO's avoided cost.

- For the next on-peak 5 MW, a flat rate of 11.8 cents per kWh escalating by 1.5% per year.

- For the new on-peak 8 MW, 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. We signed an agreement for the period between February 1, 2017 and December 31, 2017 that waives the 30,000 kWh threshold requirements such that the price for energy delivered during on-peak hours will be 6 cents per kWh regardless of the amount of MWh delivered. We recently extended the waiver until the end of 2018.

- For the first off-peak 22 MW, based on HELCO’s avoided cost.

The off-peak energy above 22 MW is dispatchable:

1. For the first off-peak 5 MW, a flat rate of 11.8 cents per kWh escalating by 1.5% per year.

2. For the energy above 27 MW and up to 38 MW, 6 cents per kWh escalating by 1.5% per year.

The capacity payment for the first 30 MW $160 kW/year for the first 25 MW and $100.95 kW/year for the additional 5 MW. For the new eight MW power plant the annual capacity payment is $2 million.

Steamboat Complex

Location	Steamboat, Washoe County, Nevada
Generating Capacity	70 MW

Number of Power Plants	Six (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	25 production wells and 12 injection wells connected to the plants through a gathering system.
Major Equipment	Nine individual air-cooled OECs and one water-cooled OEC, and one steam turbine together with the Balance of Plant Equipment.

Table of Contents

Age	The power 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.
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 at the lower area averages 270 degrees Fahrenheit. The resource at Steamboat Hills averages 325 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	The Steamboat Hills area resource temperature decline rate is 4°F per year and the Lower Steamboat decline rate is 3°F 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 leases.
Sources of Makeup Water	Water is provided by condensate and the local utility.
Power Purchaser	Sierra Pacific Power Company (for Steamboat 2 and 3, Burdette (Galena1), Steamboat Hills, and Galena 3) and Nevada Power Company (for Galena 2).
PPA Expiration Date	Steamboat 2 and 3 — 2022, Burdette (Galena1) — 2026, Steamboat Hills — 2018, Galena 3 — 2028, and Galena 2 — 2027.
Financing	Financings were fully paid.
Supplemental information	In 2017 we ceased operation of a well due to pump failures and connected a cooler well that created a significant reduction in the temperature compared to last year.

Tungsten Mountain (U.S.)

Location	Churchill County, Nevada
Generating Capacity	26 MW
Number of Power Plants	One
Technology	The Tungsten Mountain power plant utilizes an air cooled binary system.

Table of Contents

Subsurface Improvements	Four production and three injection wells are connected to the power plant.
Major Equipment	One air cooled OEC with the Balance of Plant equipment.
Age	The power plant commenced commercial operation on December 1, 2017.
Land and Mineral Rights	The Tungsten Mountain area is comprised of BLM land.
Resource Information	The project exploits blind resource (no hot springs or fumaroles) in an area of complex faulting associated with the range front fault on the western side of Edwards Creek Valley. Wells are 1,650 to 4,500 feet deep. Production temperature is approximately 290 degrees Fahrenheit with measured high permeability.
Resource Cooling	The resource temperature is stable.
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	SCPPA PPA until 2043.
Financing	Corporate funds during construction.

Tuscarora Power Plant

Location	Elko County, Nevada
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 six injection wells are connected to the power plant. A fifth production well is planned for 2018 and should be in place in early 2018.
Major Equipment	Two water cooled OECs 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 average resource temperature is 332 degrees Fahrenheit.

Table of Contents

Resource Cooling	We expect gradual decline in the cooling trend from two degrees Fahrenheit per year in the next two to three years, to less than one degree Fahrenheit per year over the long term.
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
PPA Expiration Date	2032
Financing	OFC 2 Senior Secured Notes, ITC cash grant from the U.S. Treasury and the OrLeaf transaction.
Supplemental information	Due to the drought years, supply of make-up water for the plant cooling system is declining. With the increase in ambient temperatures, during the summer months we have experienced shortfall at levels that required at certain times reduction in plant generation. At the beginning of 2018 a new well started production. Cooling water supply continues to curtail production in the summer.

Foreign Operating Power Plants

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

Amatitlan Power Plant (Guatemala)

Location	Amatitlan, Guatemala
Generating Capacity	20 MW
Number of Power Plants	One
Technology	The Amatitlan power plant utilizes an air cooled binary system and a small back pressure steam turbine (one MW).
Subsurface Improvements	Six production wells and two injection wells connected to the plants through a gathering system.
Major Equipment	Two OECs and one steam turbine 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 starting in 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 generated and 2% of revenues exceeding 20.5 MW generated. 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 518 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.

Table of Contents

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.
PPA Expiration Date	The PPA with INDE expires in 2028.
Financing	Senior secured limited recourse project finance loan from Banco Industrial S.A. and Westrust Bank (International) Limited.

Bouillante power plant (Guadeloupe)

Location	Guadeloupe, a French territory in the Caribbean
Generating Capacity	15 MW
Number of Power Plants	One
Technology	The Bouillante power plant uses direct steam turbines.
Subsurface Improvements	Two production wells and one injection well connected to the plant through a gathering system.
Major Equipment	Two steam turbines together with the Balance of Plant equipment.
Age	The first turbine commenced commercial operation in 1995 and the second turbine commenced operation in 2004.
Land and Mineral Rights	Geothermal concession of roughly 24 square miles valid through April 30, 2050. Facilities located on land held in fee, as well as long-term leases and easements.
Resource Information	The resource temperature is an average of 485 degrees Fahrenheit. Production comes from a fault that extends from the mountain into the ocean.
Resource Cooling	The resource temperature is stable.
Access to Property	Direct access to site through public roads.
Power Purchaser	EDF pursuant to a PPA.
PPA Expiration Date	December 31, 2030.
Financing	Corporate funds

Supplemental information	80% of the project is owned jointly by Ormat and CDC allocated 75% to Ormat and 25% to CDC. Ormat and CDC will gradually increase their combined interest in the project to 85% and Sageos will hold the remaining balance. We plan to convert two idle wells to injection wells to improve reservoir pressure support.

Olkaria III Complex (Kenya)

Location	Naivasha, Kenya
Generating Capacity	139 MW
Number of Power Plants	Four (Plant 1, Plant 2, Plant 3 and Plant 4).
Technology	The Olkaria III complex utilizes an air cooled binary system.

Table of Contents

Subsurface Improvements	18 production wells and five injection wells connected to the plants through a gathering system.
Major Equipment	13 OECs together with the Balance of Plant equipment.
Age	Plant 4 commenced commercial operation in January 2016, Plant 3 in January 2014 and Plant 2 in April 2013. The first phase of Plant 1 commenced operation in 2000 and the second phase in 2009.
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 average resource temperature is 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 above sea level.
Resource Cooling	The resource temperature is stable.
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	Plant 2 - 2033, Plant 1 - 2034, Plant 3 - 2034 and Plant 4 - 2036
Financing	Senior secured project finance loan from OPIC and a subordinated loan from DEG.
Supplemental information	We are planning to add additional 10 MW that will come online during 2018.

Platanares
(Honduras)