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## A VALUATION FOR TWO OPERATING SOLAR SYSTEMS

#### APPRAISAL REPORT

As of January 31, 2021

## **Prepared For**

Santa Clarita Valley Water Agency 27234 Bouquet Canyon Road Santa Clarita, CA 91350

Solar Star California XXVIII, LLC Solar Star California XXIV, LLC c/o GSAM Renewable Power Group 200 West Street, Third Floor New York, NY 10282

## **Prepared By**

Marshall & Stevens Incorporated 125 South Wacker Drive, Suite 850 Chicago, IL 60606

STEVEN R. LAMANTIA, ASA MANAGING DIRECTOR

M&S File ID: 22-21-25210

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#### TRANSMITTAL LETTER

January 29, 2021 File Reference: 22-21-25210

Matthew S. Dickens, MPA Resource Conservation Manager Water Resources – Regional Santa Clarita Valley Water Agency 27234 Bouquet Canyon Road Santa Clarita, CA 91350

Solar Star California XXVIII, LLC; Solar Star California XXIV, LLC c/o GSAM Renewable Power Group 200 West Street, Third Floor New York, NY 10282 Attn: Jordan Meer

Dear Mr. Dickens and Mr. Meer:

At the request of Santa Clarita Valley Water Agency ("SCVA"), Solar Star California XXIV, LLC ("Solar Star XXIV" or "Castaic Lake I"), and Solar Star California XXVIII, LLC ("Solar Star XXVIII" or "Castaic Lake II" and, collectively with Solar Star California XXIV, "Solar Star Entities") (SCVA and Solar Star Entities are hereinafter the "Clients" "you" or "your"), Marshall and Stevens Incorporated ("M&S", "we", "our") has made an investigation and appraisal of the Systems (as defined later in the Report) for the purpose of determining the Fair Market Value of the Systems. The purpose and intended use of the Report is to assists the Clients with a contractual option to purchase the Systems subject to the power purchase agreements (the "Transaction"). The Transaction is expected to occur January 31, 2021 (the "Valuation Date").

This appraisal provides our opinions of:

1. The Fair Market Value (as defined below) of the Systems as of the Valuation Date.

Capitalized terms used in this Report and not otherwise defined herein have the meanings set forth in the Engagement Letter.

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Santa Clarita Valley Water Agency Solar Star California XXVIII, LLC Solar Star California XXIV, LLC January 29, 2021

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Documents provided, reviewed, and relied upon for the purpose of this appraisal:

	Information Received and Relied Upon	
Provided by	File Name	Date Received
GSAM Renewable Power Group	Castaic Model_M&S (12.24.20)	12/28/2020
GSAM Renewable Power Group	Q1'20 Castaic Lake II Financial Statements	12/28/2020
GSAM Renewable Power Group	Q1'20 PNC - Castaic Lake	12/28/2020
GSAM Renewable Power Group	Q2'20_Castaic Lake Phase I	12/28/2020
GSAM Renewable Power Group	Q2'20_Castaic Lake Phase II	12/28/2020
GSAM Renewable Power Group	Q3'20 PNC - Castaic Lake II	12/28/2020
GSAM Renewable Power Group	Q3'20 PNC - Castaic Lake	12/28/2020
GSAM Renewable Power Group	Q4'19 PNC - Castaic Lake II	12/28/2020
GSAM Renewable Power Group	Q4'19 PNC - Castaic Lake	12/28/2020
GSAM Renewable Power Group	NovaSource - GSRP_NEM_OM-Template-Agreement	12/29/2020
SCVA	2018 Enel-X RES-BCT Solar Credit Allocations -Final Report 8-30-19	12/28/2020
SCVA	As-Builts	12/28/2020
SCVA	GFID8013 PTO - SCE Authorization to Operate Esign 12.19.14	12/28/2020
SCVA	PPA Phase 1 Amendment	12/28/2020
SCVA	PPA Phase 1	12/28/2020
SCVA	PPA Phase 2 Amendment	12/28/2020
SCVA	PPA Phase 2	12/28/2020
SCVA	SCV Water Solar PPA Review Memo	12/28/2020
SCVA	SCV Water Solar PV Assessment - Opex & Inverter Memo 200410	12/28/2020
SCVA	SCV Water Solar PV Assessment - TVE Presenation 200406	12/28/2020
SCVA	SCV Water Solar PV Assessment - TVE Report 200406	12/28/2020
SCVA	TerraVerde PPA Buyout Strategy Planning Report_08_18_20	12/28/2020
SCVA	2015 M1109 PM Package	12/28/2020
SCVA	2016 M1109 PM Package	12/28/2020
SCVA	2017 M1109 PM Package	12/28/2020
SCVA	2018 M1109 PM Package	12/28/2020
SCVA	2019 M1109 PM Package	12/28/2020
SCVA	2020M1109PMPackage	12/28/2020



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This appraisal and the methodology employed are based on the following definitions:

Fair Market Value ("FMV") is defined as the price at which the property would change hands between a willing buyer and a willing seller when the former is not under any compulsion to buy and the latter is not under any compulsion to sell, both parties having reasonable knowledge of relevant facts.<sup>1</sup>

When FMV is established on the premise of *Continued Use*, it is assumed that the buyer and seller would be contemplating retention of the property at its present location as part of the current operations. An estimate of FMV arrived at on the premise of Continued Use does not represent the amount that might be realized from piecemeal disposition of the property in the marketplace or from an alternative use of the property.

Residual Value is the estimated FMV as of a future date, with and/or without consideration given to the effects of inflation or deflation measured from the Valuation Date, assuming the property is in good condition and will continue to be maintained in good operating condition and will have been properly maintained, and assuming the market for used equipment of this nature at the future date will not reflect unusual conditions of supply and demand.

This Report is intended to comply with the purpose and reporting requirements set forth by the Uniform Standards of Professional Appraisal Practice ("USPAP") for an appraisal report. As such, it presents discussions of the data, reasoning, and analyses that were used in the appraisal process to develop the opinion of the value of Marshall & Stevens, as well as citing supporting documentation and displaying models and calculations concerning these matters as presented in the Appendices. The depth of discussion contained in this Report is specific to your needs as the Clients and for the intended use stated below. Marshall & Stevens is not responsible for the unauthorized use of this Report.

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<sup>&</sup>lt;sup>1</sup> Revenue Ruling 59-60; Treas. Reg. Sect. 20.2031-1(b).



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The impact of the Coronavirus pandemic (COVID-19) on the financial markets and asset values is uncertain at this time. The reader is cautioned that we have provided the most up-to-date factual information within the appraisal report that is known and relevant to our analysis but cannot make predictions about the timeline or severity of the virus and what its future impact on market activity and asset values will be. Likewise, in response to the pandemic, the Federal Reserve and the Government have begun to deploy a multi-trillion-dollar effort to support the U.S. economy, in unprecedented methods and amounts, utilizing monetary policy, quantitative easing, and other stimulus to bolster the economy. The full impact of these factors will unfold over time. In this appraisal, relative to the subject of this appraisal, we assume that its owner would likely hold the asset as a long-term investment, knowing that there will be an interim period of time in which the asset could be negatively impacted by current market conditions. As more facts unfold, we caution the reader that the value stated herein could be subject to change.

This Report sets forth the function and purpose of the appraisal; a description of the Systems, their associated Agreements and an overview of the industry in which it is operated; an outline of the employed valuation procedures; the conclusions of value and other related opinions; and the assumptions and limiting conditions affecting the conclusion of values.

## Exhibits comprising:

Exhibit A: Valuation Date Fair Market Value Exhibit B: Weighted Average Cost of Capital

Exhibit C: Certification of Appraisers Exhibit D: Professional Qualifications

Exhibit E: Qualifications of Marshall & Stevens Incorporated

#### Appendices comprising:

Appendix I: Industry Overview

Appendix II: General Economic Outlook



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#### **CONCLUSIONS**

Based upon the data and conclusions presented in the Report, it is our opinion that the Fair Market Value of the Systems as of the Valuation Date is:

Fair Market Value Conclusion					
System Fair Market Value \$/W					
Castaic Lake 1	\$2,201,000	\$2.05			
Castaic Lake 2	\$13,266,000	\$3.03			

## **CONTRACTUAL CONDITIONS**

This report is subject to the terms and conditions stated in the engagement letter between the Clients and Marshall & Stevens Incorporated dated December 11, 2020 as well as the Contractual Conditions attached thereto, which are embodied herein by reference.

Respectfully submitted,

MARSHALL & STEVENS INCORPORATED

Marshall of Stevens Incorporated

Analysis and Report By Steven R. LaMantia, ASA Managing Director

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Exhibit A: Valuation Date Fair Market Value Exhibit B: Weighted Average Cost of Capital

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Appendix I: Industry Overview

Appendix II: General Economic Outlook

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#### I. PURPOSE OF THE APPRAISAL

#### **Transaction Description**

The purpose of this appraisal was to arrive at an opinion of the Fair Market Value of the Systems valued as of the Valuation Date.

SCVA and Solar Star XXIV have entered into that certain power purchase agreement, dated as of March 25, 2013 (as amended prior to the date hereof, the "Solar Star XXVI PPA"). SCVA and Solar Star XXVIII have entered into a separate power purchase agreement, dated as of March 7, 2013 (as amended prior to the date hereof, the "Solar Star XXVIII PPA", and, collectively with the Solar Star XXIV PPA, the "PPAs").

Pursuant to Section 10.5 of the Solar Star XXVIII PPA, SCVA has a contractual option to purchase the solar energy "System" subject to such PPA (as the term "System" is defined in the Solar Star XXVIII PPA, the "Solar Star XXVIII System"). In a Notice of Change of Ownership and Waiver, Acknowledgement and Amendment Agreement, dated as of March 28, 2019, the Solar Star XXIV PPA was amended to incorporate the purchase option provisions in Section 10.5 of the XXVIII PPA into the Solar Star XXIV PPA with respect to the "System" (as such term is defined in the Solar Star XXIV PPA, the "Solar Star XXIV System", and, together with the Solar Star XXVIII System, the "Systems"). The Systems are located at SCVA's facilities in Santa Clarita, California.

#### II. APPRAISAL SCOPE

This Report is prepared in accordance with the Scope and Purpose as agreed upon between Marshall & Stevens and the Clients in the signed engagement letter, dated December 11, 2020 and incorporated herein by reference.

In the course of the valuation of the Systems, information supplied by the Clients, or their advisors, was utilized in this appraisal. This information was assumed to be a complete and accurate representation of the appraised property, and no information to the contrary is known. No inspection of the subject Systems was undertaken for this appraisal.

This investigation expresses opinions as of the Valuation Date of this Report. The opinions provided are based on M&S's view of the solar market reflecting economic conditions as they existed on the date of this Report, and the assumption that the Systems are in good operating condition and were maintained in accordance with manufacturer recommendations, industry standards. Unforeseen events may affect the opinions of future value, but these events inherently cannot be considered in the opinions.

In order to derive FMV, the market approach, cost approach, and income approach were considered in the analysis. The secondary market for facilities like the Systems were researched and considered for this valuation. The market data for this analysis is limited as sales of such assets do not occur frequently and in many cases the full details of such transactions are not made publicly available. Therefore, although the market approach was considered in this analysis, we have not relied on the market approach in valuing the subject Systems. As the cost of building a solar project has significantly changed since the commercial operation of the Systems, a market participant would consider the income approach to be most appropriate. As this considers the asset in place and its current economics whereas the cost approach cannot. As such, the cost approach was not performed for this valuation. The income approach was deemed appropriate and relied upon solely in the valuation of the Systems and discussed further in the Report.

#### III. TERMINOLOGY

This appraisal and the methodology employed are based on the following definitions:

**FMV** is defined as the price at which the property would change hands between a willing buyer and a willing seller when the former is not under any compulsion to buy and the latter is not under any compulsion to sell, both parties having reasonable knowledge of relevant facts.<sup>2</sup>

When FMV is established on the premise of *Continued Use*, it is assumed that the buyer and seller would be contemplating retention of the property at its present location as part of the current operations. An estimate of FMV arrived at on the premise of Continued Use does not represent the amount that might be realized from piecemeal disposition of the property in the marketplace or from an alternative use of the property.

The premise of Continued Use is generally appropriate when:

- a. The property is fulfilling an economic demand for the service it provides or which it houses;
- b. The property has a significant remaining useful life expectancy;
- c. There is responsible ownership and competent management;
- d. Diversion of the property to an alternative use would not be economically feasible or legally permitted;
- e. Continuation of the existing use by present or similar users is practical;
- f. Due consideration is given to the property's functional utility for its present use; and
- g. Due consideration is given to the property's economic utility.

**Economic Useful Life** ("EUL") is the estimated period of time over which it is anticipated an asset may be profitably used for the purpose it was intended. This time span may be limited by changing economic conditions, factors of obsolescence, or physical life.

**Remaining Economic Useful Life ("REUL")** is the estimated remaining period of time over which it is anticipated an asset may be profitably used for the purpose it was intended. This time span may be limited by changing economic conditions, factors of obsolescence, or physical life.

All these factors are expected to be present throughout the useful lives of the Systems. In the investigation, M&S has appraised the Systems as part of an operating entity. M&S determined whether the prospective profits in respect of the Systems were adequate to justify ownership and arm's-length exchange of the designated assets between a willing buyer and a willing seller at the appraised FMV.

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<sup>&</sup>lt;sup>2</sup> Revenue Ruling 59-60; Treas. Reg. Sect. 20.2031-1(b).

#### IV. DESCRIPTION OF THE SYSTEMS

5.5 MW<sub>DC</sub> of solar PV systems was deployed in two phases located at SCVA's facilities in Santa Clarita, California. The Systems have been operating as of the commercial operation dates ("COD(s)") provided below. Below, details of the phases are outlined adjacent to the figure that shows the arrays in the lower left and upper right of the figure.

Solar Systems						
	Castaic Lake 1	Castaic Lake 2				
System Size (MW)	1.075	4.385				
Modules	(3,288) SPWR- 327W	(10,080) SPWR- 435W				
Inverters	(2) SATCON PVS- 500	(4) SMA 500CP-US (2) SMA 750CP- US				
Mounting Type	Single Axis Tracker	Single Axis Tracker				



As described in previous sections of the Report, the Systems are selling energy under executed PPAs. The terms of each PPA are outlined in the table below.

Power Purchase Agreement Summary							
Phase 1 Phase 2							
Provider	Solar Star California XXIV, LLC	Solar Star California XXVIII, LLC					
Customer	Castaic Lake Water Agency	Castaic Lake Water Agency					
Commercial Operation Year	2011	2014					
Term Length	20-years	25-years					
Initial PPA Rate (\$/kWh)	\$0.105	\$0.114					
Annual PPA Escalator	2.0%	2.0%					
Valuation Date PPA Rate	\$0.125	\$0.128					

Further, in order to ensure the subject assets are in proper working order, it was considered the Systems will continue to be maintained in accordance with industry standards through an operations and maintenance agreement (the "O&M"). As of the date of this Report, an O&M is being negotiated with a new provider. A draft<sup>3</sup> O&M was reviewed for the purpose of this appraisal.

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<sup>&</sup>lt;sup>3</sup> Draft O&M Agreement provided by GSAM Renewable Power Group

In the appraisal of a business, business interest, or investment asset, the state of the general economy and industry prospects for the future are important considerations. The value of investment assets is indirectly related to the state of the general economy by virtue of factors such as inflation, interest rates, and consumer confidence levels.

The overviews of the power industry and general economy are provided in Appendices I and II, respectively. Based on a review of economic and industry information, the overall outlook for the Systems is considered to be average. An overview of the macroeconomic factors that could affect the prospects of the Systems are summarized below.

## Economic Overview - Q3 2020

The coronavirus pandemic is an ongoing pandemic of coronavirus disease 2019 ("COVID-19" or "Coronavirus") and is a severe acute respiratory syndrome that may result in death. The outbreak was first identified in China, in December 2019, and was recognized as a pandemic by the World Health Organization on March 11, 2020.

Prevention in Q3 included quarantines, stay-at-home mandates, curfews, travel bans and travel advisories. Despite the White House advising all Americans to practice social distancing, the number of Coronavirus cases in the US continued to rise until abating in June. Since then, several states have reopened in phases in order to balance social distancing with resuming business. However, medical cases and deaths started up ticking at the end of the summer and causing concerns heading into the November Presidential election.

The rapidly evolving situation is completely unpredictable, and its attendant short term and long-term impact on the U.S. and global economies have resulted in rapid and material market changes. A more comprehensive overview of the economy is provided in Appendix II of this report.

#### Renewable Energy Industry Overview - Q3 2020

Consistent with our approach above, M&S will briefly summarize current professional perceptions about the market's reaction to the COVID-19 pandemic and the impact it could have on the solar and wind industries in particular. Prior to the COVID-19 pandemic, the U.S. renewables wind and solar was on track to post record capacity additions in 2020. However, the COVID-19 situation has caused major supply chain disruptions and physical interactions of laborers in the renewable renewables sector, as well as reduced power demand across the U.S. during the country's lockdown. While the near-term industry situation is deeply uncertain, it may be cautiously assumed that the COVID-19 impact may be followed by a return to normalcy in 2021.

While the COVID-19 situation is playing out as described above, in May the renewables industry had been challenged by a couple of other governmental items concerning the industry. Specifically, an executive order and a US Department of Commerce fair trade inquiry concerning transmission and electric generating equipment and electrical transformers had been issued, respectively. Both are items that could be necessary for project interconnection to the grid.



On May 1, 2020, President Trump issued an executive order banning the "acquisition, importation, transfer, or installation" of transmission and electric generating equipment designed, manufactured or supplied by any company that is "subject to the jurisdiction" of a country the US considers a "foreign adversary." Several questions arose due to the broad nature of the Order, such as who the foreign adversaries may be and which power projects are impacted. The effective date of the ban is unclear as the item is out for up to a 150-day review and regulation written by U.S. Energy Secretary Dan Brouillette, (and working in consultation with national security agency heads). The deadline for such regulations was September 28, 2020. Keith Martin, Partner at Norton Rose Fulbright, addresses the uncertainty surrounding the effects of the Order. "It is too early to tell how much, but some level of pullback in the short term from Chinese equipment seems inevitable, especially for equipment like transformers or batteries that is closer to the grid than other equipment like solar panels." Additionally, pursuant to the Clients, the executive order will not affect the Systems as the countries of origin for major System equipment are not considered "foreign adversaries". See the table below.

Equipment	Country of Origin
Generator Step-Up Transformers	United States
High-Voltage Breakers	United States
Low-Voltage Breakers	Mexico
CCVTs or CVTs	United States
High-Voltage Switches	United States

An announcement on May 4, 2020 indicated the US Department of Justice planned to launch an investigation that may lead to tariffs on imported electrical transformers and their components. These tariffs could add up to 25% of the cost for the transformers in wind and solar projects. The central issue in the investigation is "whether transformer imports pose a national security threat to the United States...The Commerce Department was expected to publish a notice shortly in the Federal Register with details about the scope of the new investigation. The notice will set a 270-day clock to run the investigation. If a national security threat is found, the president will have another 90 days after that to take action."

Lastly on May 27, 2020, the Internal Revenue Service issued Notice 2020-41 in response to start of construction delays caused by COVID-19. It grants extension to expiring renewable energy tax credit level deadlines.

Wind developers who started construction of wind farms in 2016 or 2017 now have one more year to finish the projects and qualify for federal tax credits. If a project satisfies the 5% Safe Harbor due to its construction start date, the developer must be able to prove continuous efforts of construction to continue to qualify for the safe harbored PTC amount. Under prior IRS guidance, PTC could be considered safe harbored for either the Physical Work Test or the 5% Safe Harbor if the relevant project was placed in service by the end of the calendar year that is no more than

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<sup>&</sup>lt;sup>4</sup> Martin, Keith. "Trump bans certain power equipment". Norton Rose Fulbright. May 1, 2020.

<sup>&</sup>lt;sup>5</sup> Martin, Keith. "Trump Bulk-Power System Order: Market Reaction". June 2020.

<sup>&</sup>lt;sup>6</sup> Martin, Keith. "Possible transformer tariffs under review". Norton Rose Fulbright. May 4, 2020

four calendar years after the calendar year when construction began (now five years under the Notice for projects that began construction in 2016 or 2017). Pursuant to the revised IRS guidance, a facility that began construction in 2016 or 2017 would satisfy the continuity safe harbor if the facility was placed in service by the end of the fifth calendar year after the Physical Work Test was met or the 5% Safe Harbor was satisfied. If a developer satisfied either test in 2018 or 2019, the four-year continuity safe harbor would still apply. Accordingly, this new guidance provided by the Notice will primarily benefit projects claiming PTC, since the PTC has an earlier phaseout period than ITC and is more directly impacted by the concessions made for 2016 and 2017 projects.<sup>7</sup>

The IRS also gave relief to solar and fuel cell companies that paid for equipment in late 2019 expecting to take delivery within 3 ½ months after payment but had delivery delays due to supply-chain problems. The Notice lets anyone who paid in 2019 for equipment count the payment as a 2019-incurred cost for purposes of starting construction under the 5% test as long as the equipment is delivered or title passes by October 15, 2020. The 2019 payment would have had to have been made on or after September 16, 2019. While this part of the notice is of most benefit to solar projects, the same relief will apply to all equipment orders in late 2019.

## Solar Industry Overview – Q2 2020

While work restrictions, due to the coronavirus pandemic, on solar projects have now lapsed across most of the country, it remains unclear when normalcy will return for the tens of thousands of installers who make up the bulk of the U.S. solar workforce. This uncertainty raises questions about how one of the fastest growing segments of the economy in recent years will emerge from the crisis. The Solar Energy Industries Association stated that U.S. solar employment was on track to plummet to 188,000 at the end of the second quarter, a level not seen since 2014 and 114,000 fewer workers, mostly installers, than expected before the crisis began.

Solar installations are on pace to fall by about 15% this year due to the coronavirus pandemic, according to REC Silicon ASA CEO Tore Torvund, and setting the stage for the sort of market glut that in the past has caused decreasing equipment prices. Small installation companies, as well as their hard-hit larger counterparts, have seen a falloff in new orders. Several companies have cited potential 30% to 50% drops in new orders in the second quarter, though most expect sales to pick up in the third quarter.

However, new build solar projects remain intact and are not subject to significant changes. As provided in Appendix I, the conclusion for the near-term future for the newbuild solar industry is guarded; however, the market for completed projects is robust and has had upward pricing trends during 2020 (further discussed in following Approaches to Value report section).

The following information in this report section and in Appendix I is abstracted from various sources and from report data from Latest Quarterly and Annual US PV Historical Data Release –

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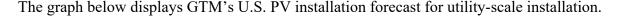
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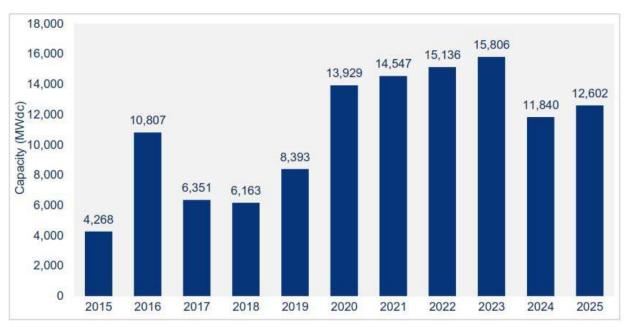
<sup>&</sup>lt;sup>7</sup> Medina, Jorge. "IRS Extends Continuity Safe Harbor for Renewable Energy Projects". Pillsbury Law. May 28, 2020.

Q2 2020 publication release), as well as the U.S. Solar Market Insight: Q3 2020 (published September 10, 2020).

In Q2, the U.S. solar market installed 3.5 gigawatts direct current (GW<sub>DC</sub>) of solar photovoltaic (PV) capacity, a 7% decline quarter-over-quarter. However, installations in the quarter increased 52% year-over-year, marking the largest second quarter ever. Much of this was attributed to utility PV which comprised over 70% of the quarterly capacity installed, or a record 2.5 GW in total. The gains are due to lengthy development timelines and limited interaction with consumers. Residential solar saw an installation decline of 23% from Q1 2020 with only 617 MW installed. Non-residential PV experienced a decline of 12%, the lowest quarterly total in four years. Overall, solar PV comprised 37% of all new electricity-generating capacity additions during the first half of 2020, second to natural gas.

Nearly 5.0 GW<sub>DC</sub> of utility-scale PV capacity came online in the first half of 2020. Utility PV maintained the largest share of installations in the U.S. solar market in Q1 2020 with 2.5 GW<sub>DC</sub> deployed, representing over 70% of quarterly capacity additions. 13.6 GW<sub>DC</sub> are under construction with 8.2 GW<sub>DC</sub> forecasted to be completed by the end of the year. The five-year forecast declined by 1.2 GW<sub>DC</sub> due to declines from the previous forecast in 2020 and 2021, growth from 2022-2023, and declines from 2024-2025. Through 2025, it is expected a total 83.9 GW of utility-scale solar projects will come online, almost double the amount installed over the past 10 years.





Source: GTM/SEIA Q3 2020 U.S. Solar Market Insight Report

As of the end of Q2 2020, the United States' cumulative contracted pipeline had reached a new record total of 62.2 GW<sub>DC</sub>, as Q2 procurement reached 8.7 GW<sub>DC</sub> of new power-purchase agreements signed or announced. "The pandemic has caused very few procurement delays beyond what developers and engineering, procurement and construction (EPC) providers see under normal conditions. Across the U.S., electricity demand remains strong, and utility PV is cost-competitive with natural gas and other forms of power generation in the majority of state markets. However, we are beginning to see signs of potential headwinds. With increasing frequency, banks and investors are showing signs of insufficient tax equity investment for all projects in development. Additionally, some developers have expressed concern that there will not be enough EPC bandwidth to complete their development pipeline. This is all combined with broader financial market instability caused by the coronavirus pandemic." As a result, projects' commercial operation dates may be delayed.

Over the next five years, 83 GW<sub>DC</sub> of utility PV capacity is expected to come online. As mentioned previously, the forecasts for 2020 and 2021 have decreased as projects are being delayed into 2022 and 2023. However, the forecast for 2024 remains strong as overall demand grows due to utilities backing state renewal initiatives and incorporating solar procurement targets into their integrated resource plans.

According to the International Energy Agency ("IEA") in November 2020, global renewable installations will slow in 2020 as a result of the coronavirus, with 107 GW of capacity anticipated, a slight decline from 2019. IEA acknowledges projects continue to be constructed, but at a slower pace. "Deployment of distributed PV applications remains sluggish in large markets such as China and the United States, although activity in most European markets, Australia and Brazil has not been hampered significantly."

IEA forecasts nearly 17 GW of US solar PV expansion for 2020, the highest increase to date. Utility-scale projects are a key driver with 3.9 GW more additions than in 2019. Construction of these projects has remained largely unaffected by shelter-in-place orders as many states consider construction to be an essential service. "Growth is expected to remain strong in the second half of the year, as remaining social-distancing measures are assumed to have very little effect on the considerable 13.6 GW under construction."

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<sup>&</sup>lt;sup>8</sup> "Renewables 2020: Analysis and Forecast to 2025". International Energy Agency. November 2020.

#### VI. BASIS OF VALUE

In any appraisal, consideration must be given to the three basic approaches to value. These are the income, market, and cost approaches. These approaches are outlined as follows:

## The Market Approach

The market approach establishes value through analysis of recent sales of comparable property. An analysis is made of the differences between the properties and the subject, and the sales prices are correspondingly adjusted to arrive at indications of the subject's value.

## The Cost Approach

The foundation of the cost approach is the proposition that an informed purchaser would pay no more for a property than the cost of producing a substitute property with the same utility. When the approach is applied, property facts are assembled in an appraisal inventory, and data regarding costs and price-governing factors are gathered. The accumulated data are then employed to develop the cost of reproduction new or the cost of replacement of the subject property.

From the cost to reproduce the property as if new, an amount is deducted for accrued depreciation or physical deterioration, plus any functional and economic obsolescence that might exist. If the cost of replacement has been determined, no penalty for functional obsolescence is applied, since this cost represents that of a state-of-the-art property. The cost approach ordinarily supplies the most reliable indication of the FMV of special structures, systems, and special machinery and equipment.

#### The Income Approach

The income approach establishes the value of the property on the basis of capitalization of the net earnings or cash flow. The income approach is typically used in the valuation of assets that produce, or are capable of producing, an identifiable stream of income or cost savings that can be uniquely quantified.

Each of the three approaches was considered in the analysis. The premise and purpose of a value are factors in the decision of selecting the appropriate valuation method to draw an ultimate concluded value.

For the Market Approach, sales prices for assets of comparable type, capacity, configuration, and age are obtained and reviewed in an effort to establish values. The secondary market for solar energy projects was researched and considered for this valuation.

True secondary market transaction of new or near new renewable energy projects rarely occur and, in many cases, the full details of such transactions are not made publicly available. Therefore, although the Market Approach was considered in this analysis, we have not relied on the approach in valuing the subject systems. As explained in the Fair Market Value Report Section, a direct market approach is not applicable in the valuation of the Systems.



#### **BASIS OF VALUE**

The Cost Approach is an accepted method of valuation, especially in instances where the subject is new or nearly new, or when no other approach is applicable. In this instance, As the cost of building a solar project has significantly changed since the commercial operation of the Systems, a market participant would consider the Income Approach to be most appropriate. As such, the Cost Approach was not deemed appropriate and not performed in the valuation of the Systems.

The Income Approach uses financial projections, which reflect the future income generating capability specific to each Systems, the impact of operating in a particular regional power market, and the impact of certain tax attributes and incentives available to each Systems.

The circumstances behind each valuation analysis, as well as the point in time in which the valuation is taking place, determine which premise of value is the most appropriate.

In conclusion, all three approaches to value were considered in the valuation of the Systems.

## VII. ECONOMIC USEFUL LIFE AND REMAINING ECONOMIC USEFUL LIFE

Integral to the valuation of the Systems, as of the Valuation Date, is the determination of Economic Useful Life and Remaining Economic Useful Life. Consideration is given to the anticipated maintenance, repair, and replacement policies of a typical user, taking into account likely replacement of the shorter-lived components over the estimated life of the property, within the limits defined by the lives of the longest-lived components.

A determination of the effective age of the property is made as part of the adjustment analysis, which may be greater or lesser than its physical age. In the case of new property, depreciation and obsolescence are not taken into consideration because the property is new and considered not to have suffered from depreciation or obsolescence. Based on the fact that the Systems are operational as of the Valuation Date, the REUL for each System is computed by first determining the EUL (when new) of the facility and then adjust the EUL to an REUL estimate based on the actual physical condition and any functional and external obsolescence that may exist.

In estimating the EUL of each System, we have relied on data gathered while performing analyses on similar systems in the past. This data consisted of the results of discussions with component manufacturers regarding the warranties and design life of the modules, inverters, and other system components.

Since many of the original photovoltaic ("PV") systems that were installed in the 1980s and 1990s are still in use today, there is little available tangible data on PV system retirements. In addition, given that there were no utility-scale solar facilities installed in the 1980s and 1990s, the modules and panels that have been tested over the years have been commercial and residential grade units. Results of these tests and studies are presented in the following discussion.

- In 2009, the Centre for Alternative Technology (CAT), located in Europe, followed up on a 2002 study performed by the University of Applied Sciences of Southern Switzerland on monocrystalline PV solar panels installed in 1982. The follow-up found that less than 1.0% of the original panels had to be replaced, and the remaining panels performed at output levels of approximately 90% of the initial rated output. CAT concluded that a PV installation, whether mono- or polycrystalline, should produce electricity for 30-years or longer.
- In an August 5, 2009 report in the publication Scitizen, Chris Goodall reported on a Japanese company, Next Energy and Resources Co., which reuses old PV panels. They tested 330 panels originally manufactured in 1984; and 90% of these 25-year-old panels still generated 80% or more of their initial rated output. With the technological advancements in the industry, current manufactured panels are expected to outperform these 1984 panels not only in electricity output but in longevity.



## ECONOMIC USEFUL LIFE AND REMAINING ECONOMIC USEFUL LIFE (OPINION 1)

- In 2011, Kyocera, a solar module manufacturer with more than 30 years in the industry, performed case studies on three of their oldest multi-crystalline module installations; a 2.1kW system installed in Sweden in 1984; a 43kW system installed just outside of Tokyo also in 1984; and a 10kW system in China installed in 1985. Upon testing in 2011, all three systems produced electricity above 80% of the rated system capacities, nearly thirty years after initial installation.
- In 2012, when asked about thin film life expectancies past 30-years during a web conference, experts responded "20-30 years are expected as well, of course. Otherwise the technology would not sell. Unlike for mono- and polycrystalline modules, there is not yet enough empirical data for thin film to verify and ultimately confirm these lifetime expectations. However, the available data clearly indicates that they will be met. Whether 30+ years can be expected without too much degradation as it seems to be the case for mono- and polycrystalline products remains to be seen. There's little experience, since the technology is still young."

   Stefan De Haan from Isuppli, a technology market research firm. In response to this comment Finlay Colville of Solar Buzz, a Solar Market and Analysis firm rebutted "There is currently no strong reason to suggest any significant difference in lifetimes. Thin-film cells were employed in mass production for consumer electronics (e.g. calculators) many years ago also."
- Other published evidenced suggest a long asset life of at least 30-years:

Japan for Sustainability published findings from a Next Energy and Resources "...[solar] panels had been installed for about 20 years from December 1989 to February 2009 in Shirahama Energy Land, an amusement park located in Shirahama, Wakayama Prefecture, in western Japan. Before that, the panels had been used as equipment for research and development/demonstration experiments in Hamamatsu City, Shizuoka Prefecture, in eastern Japan, making them 25-year-old panels... In January 2008, Next Energy and Resources had a similar experience; in Kamishihoro-cho, Hokkaido, in northern Japan, the company found 6,500 solar panels which were roughly 20 years-old with a total power generation of about 300 kilowatts, equivalent to the amount of energy used by 100 houses, and reused them."

Brightstar Solar has a similar statement: "Typically, solar panel manufacturers issue a 20- or 25-year warranty on panels, but most installers say they can endure more than 40 years with proper care." 9

Genersys PLC, a London-based manufacturer of residential solar panels, markets their model 1000-10 with a 20-year warranty and a 35-year life expectancy.

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<sup>&</sup>lt;sup>9</sup> http://brightstarsolar.net/life-expectancy-of-solar-photovoltaic-panels/

# ECONOMIC USEFUL LIFE AND REMAINING ECONOMIC USEFUL LIFE (OPINION 1)

The results of the tests and studies presented above provide evidence of a physical useful life for commercial and residential grade solar technology in the range from 20-to-40-years, and thus would support a useful life of approximately 30-years or longer.

An important aspect of the EUL is the maintenance of the asset. It is expected the O&M will be executed, and the operator will adhere to its written policy, at a minimum. The equipment components are expected to perform at or near their respective design specifications for a period in excess of the provided warranties.

In the determination of each System's EUL, M&S considered that the Systems have site access rights secured through the PPAs with 20-year and 25-year initial terms for Castaic Lake 1 and Castaic Lake 2, respectively. The contracts do not include an option to extend the term. Therefore, for the purpose of this appraisal, the EUL is constrained by the terms of the PPAs.

Based on historical solar technology operating experience, the projected earnings of the Systems, and the site access rights constraint, the EUL of the Systems is expected to be 20 years and 25 years from the Commercial Operation Date for Castaic Lake 1 and Castaic Lake 2, respectively.

Subtracting the effective/physical/chronological age from the EUL new provides for an indication of REUL as of the Valuation Date. As such the REUL are shown below.

Remaining Economic Useful Life					
System COD EUL REUL					
Castaic Lake 1	12/15/2011	20-years	11-years		
Castaic Lake 2	12/24/2014	25-years	19-years		

## 1. Market – Sales Comparable Approach

The Market Approach (secondary market transactions) was considered in the valuation of the Systems. In the case of newly or recently constructed renewable energy projects, there is no publicly available data on sales of 100% interests in the marketplace.

The nature and character of new or recently constructed renewable energy projects do not lend themselves to being subject to secondary market sales. Such projects are capital intensive and are typically constructed after a process of lining up the numerous counterparty agreements amongst project participants and having long-term financing established. Then at the point of commercial operation, and with the project generating revenue, the project provides a relatively predictable income stream. While these investments have relatively predictable income streams, they are not transacted in a liquid secondary market.

There is minimal transaction information available to the public regarding third-party sales of newly or recently constructed renewable energy projects in the marketplace, and any sales transactions in the marketplace are infrequent. Such transactions are generally entered into among private parties and transaction terms are treated as confidential. Therefore, there is little data on secondary market transactions from which to obtain a reliable indicator of value for the Systems valuation.

## 2. Cost Approach

The Cost Approach was considered in the valuation of the Systems. The cost approach considers the replacement and reproduction of the property and then depreciates the cost to a fair market value. In this instance, the cost to reproduce the asset cannot be determined as the market has changed significantly since each System's COD (2011 and 2014). Comparing the subject to replacement properties would require adjustments that cannot be substantiated as there is no public information available on the current replacement of certain agreements and other aspects of maintaining the asset. As the costs of building a solar project has significantly changed since the commercial operation of the Systems, a cost approach analysis was not deemed appropriate to determine FMV. Additionally, we believe a market participant would consider the income approach to be most appropriate as this considers the asset in place and its current economics whereas the cost approach cannot.

#### 3. Income Approach

As described herein, the Income Approach was applied in the valuation analysis. The income approach to value recognizes the economic benefits inherent in the ownership rights of the subject assets, when used in the production of income. While this approach may result in somewhat different conclusions than other approaches to value, it can be a very reliable indicator, as most business decisions are based on the economic influences taken into account in the income approach. This section of the Report describes the methodology, inputs, and assumptions used in that analysis.



**Discounted Cash Flow Analysis** — A common financial technique known as discounted cash flow ("DCF") analysis is used in determining the income approach indication of value for income-producing investment assets and businesses. This technique relies on projections of income, expenses, and other receipts and expenditures reasonably anticipated over the life of the subject assets. These figures become the basis for projected net cash flow, the amount of cash that the investment might generate, net of disbursements and after tax, through the highest and best business use of the investment.

Project valuations are made on the basis that all investor returns are included in the cash flows, that is, without deduction of interest costs that may be incurred, nor dividends that may be paid. The reason for this perspective is that the resulting debt-free net cash flows ("DFNCF") are the return available to all investor sources, such as creditors and equity owners. DFNCF were defined as revenue less expense, less tax, plus depreciation add back, less the capital expenditures and working capital requirements, plus the after-tax salvage value of the Systems.

The projected DFNCF are converted from future amounts into present amounts through a process known as discounting. Discounting reflects the time value of money in any investment situation. Generally, investors prefer cash now versus sometime in the future. Since the nature of most investments includes waiting for future receipts of cash, investors expect to earn a return on their investment, much like interest paid by a bank to savings account holders. Discounting incorporates a fair return for all equity holders and creditors of the subject assets and reduces the value of anticipated future cash flows that typical investors would expect.

Once discounted to present value, the projected DFNCF are summed to determine the aggregate cash return expected for the subject asset, in terms of present value. This sum of present values of projected DFNCF represents the economic benefit, or return, from the asset, in current terms. This amount is also the maximum amount that a prudent investor would be willing to pay for the assets, as well as the expected value to an owner. Hence, this sum represents an indication of FMV via the income approach.

#### **Discounted Cash Flow Assumptions**

In the application of the discounted cash flow methodology certain assumptions were made that result in the projected cash flows. The following report sections describe the specific assumptions used and how they affect the analysis.

A forecast of energy output, revenues, and operating expenses was obtained from the financial model provided by GSAM Renewable Power Group (the "FM"). The assumptions in the FM were reviewed and analyzed. After reviewing the assumptions in the model and the supporting documentation, it is M&S's opinion that the forecasts constructed provide a reasonable basis for the valuation of the respective System.



Energy Production Forecast

The FM<sup>10</sup> forecasted energy productions and SCV Water Solar PV Portfolio Assessment (presented by TerraVerde Energy) were considered in determining the energy output utilized in the discounted cash flow analysis.

Per the FM, the REUL energy output forecast is displayed in the following table.

Castaic Lake 1 Forecasted Production											
Operating Year	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Production (MWh)	2,091	2,080	2,070	2,060	2,049	2,039	2,029	2,019	2,009	1,999	1,989

Castaic Lake 2 Forecasted Production											
Operating Year	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Production (MWh)	8,629	8,586	8,543	8,500	8,458	8,415	8,373	8,331	8,290	8,248	8,207
Operating Year	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042
Production (MWh)	8,166	8,125	8,084	8,044	8,004	7,964	7,924	7,884	-	-	-

First, National Renewable Energy Laboratory's ("NREL") PVWatts Calculator was used to determine if the FM forecasted energy productions of 2,091 MWh (Castaic Lake 1) and 8,629 MWh (Castaic Lake 2) for operating year 2021 were reasonable. After inputting each Systems geographical location, system size, and array type, the PVWatts results supported and were within a reasonable range of the forecasted production assumed in the FM.

Next, the SCV Water Solar PV Portfolio Assessment (presented by TerraVerde Energy) was considered. The following tables summarize actual versus expected performance of the Systems for the 2018 and 2019 calendar years. The 2018 figures represent the production from February 2018 through January 2019. The 2019 figures represent the production for the 2019 calendar year. Expected values are based on the expected year-1 yield (kWh / kWp) values defined in the PPAs, degraded annually at 0.50%. Although 2018 production is in line with expectations, underperformance was noted in 2019.

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<sup>&</sup>lt;sup>10</sup> Castaic Model\_M&S (12.24.20)

2018 Production Change Summary						
Crataus	Expected Production	Actual Production	%			
System	(kWh)	(kWh)	Change			
Castaic Lake 1	2,163,946	2,212,891	102%			
Castaic Lake 2	9,127,880	9,137,609	100%			
TOTAL	11,291,826	11,350,500	101%			

2019 Production Change Summary						
Crystam	Expected Production	Actual Production	%			
System	(kWh)	(kWh)	Change			
Castaic Lake 1	2,153,127	2,067,559	96%			
Castaic Lake 2	9,082,241	8,669,339	95%			
TOTAL	11,235,367	10,736,898	96%			

The production forecasts used in the FM is supported by PVWatts and actual production, and therefore we believe the FM forecast is reasonable to utilize in the discounted cash flow analysis. In addition, our opinion is that the annual degradation assumption of 0.50% is reasonable and is supported by our experience.

#### PPA Revenue

As the Systems are operating under executed PPAs, the discounted cash flow analysis utilized the energy output and escalated PPA prices to forecast the PPA revenues for the remainder of the contract terms. The tables below summarize each System's PPA revenues and prices.

Power Purchase Agreement Summary						
	Castaic Lake 1	Castaic Lake 2				
Provider	Solar Star California XXIV, LLC	Solar Star California XXVIII, LLC				
Customer	Castaic Lake Water Agency	Castaic Lake Water Agency				
Commercial Operation Year	2011	2014				
Term Length	20-years	25-years				
Initial PPA Rate (\$/MWh)	\$105	\$114				
Annual PPA Escalator	2.0%	2.0%				
Valuation Date PPA Rate (\$/MWh)	\$125	\$128				

Castaic Lake 1 PPA Revenues											
Operating Year	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Production (MWh)	2,091	2,080	2,070	2,060	2,049	2,039	2,029	2,019	2,009	1,999	1,989
PPA Price (\$/MWh)	\$125	\$128	\$131	\$133	\$136	\$139	\$141	\$144	\$147	\$150	\$153
PPA Revenue	\$262,372	\$266,282	\$270,249	\$274,276	\$278,363	\$282,510	\$286,720	\$290,992	\$295,327	\$299,728	\$304,194

Castaic Lake 2 PPA Revenues											
Operating Year	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Production (MWh)	8,629	8,586	8,543	8,500	8,458	8,415	8,373	8,331	8,290	8,248	8,207
PPA Price (\$/MWh)	\$128	\$131	\$134	\$136	\$139	\$142	\$145	\$147	\$150	\$153	\$156
PPA Revenue	\$1,107,791	\$1,124,297	\$1,141,049	\$1,158,051	\$1,175,306	\$1,192,818	\$1,210,591	\$1,228,629	\$1,246,935	\$1,265,514	\$1,284,371
Operating Year	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042
Production (MWh)	8,166	8,125	8,084	8,044	8,004	7,964	7,924	7,884	-	-	-
PPA Price (\$/MWh)	\$160	\$163	\$166	\$169	\$173	\$176	\$180	\$183	-	-	-
PPA Revenue	\$1,303,508	\$1,322,930	\$1,342,642	\$1,362,647	\$1,382,950	\$1,403,556	\$1,424,469	\$1,445,694	-	-	-

Economic analysis of the PPAs was conducted to determine if any value should be assigned as an intangible asset due to PPA pricing being above market rates. This consideration would factor into the asset tax category allocation of the Systems (i.e., the tax sheltering benefit of the Systems), which is addressed further in this report section.

As previously provided, the PPAs were executed in 2011 and 2014. While electricity and solar energy equipment prices have declined since, it is noted that the subject PPAs have power price 2.0% annual escalators.

There is not a transparent market data for publicly available PPA pricing information. Based on our experience and appraisals of similar assets in the California market, the subject PPA prices could be slightly above what can be expected when negotiating a PPA today. However, such market rates are observed to have future price inflation associated with them at the 2021 PPA contract rates. For the purpose of this valuation, it is concluded reasonable that de minimis intangible value could be present. See the depreciation report subsection for the tax category allocation concluded for this valuation.

## End of PPA Assumption

As previously discussed, the Systems do not have site rights beyond the initial term of the PPAs, and the System components are required to be removed. Beside removal of the Systems at the end of the PPAs, the subjects could hypothetically stay in place by obtaining site rights or renewing the PPAs with Santa Clarita Water Agency; however, such assumption is concluded to result in low net earnings to the owner of the Systems. Reinstallation of the Systems, given their ages at PPA expirations are not considered economical.

Therefore, it is concluded that post-PPA value of the Systems is reasonably represented as a salvage value of the System equipment components. It is estimated that \$400,000 (\$0.37/W) and \$1,000,000 (\$0.23/W) respectively represent Castaic Lake 1 Castaic Lake 2 residual values at the end of the PPA terms.

#### Operating Expenses

Major operating expenses for the Systems are expected to be O&M, inverter major maintenance, insurance, and administration expenses.



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The O&M fees in the FM were analyzed on an annualized \$/kW basis against the Lazard report<sup>11</sup>, which published an O&M benchmark of \$12-16/kW for community solar systems. Castaic Lake I and Castaic Lake II O&M fees of \$14/kW and \$10/kW, respectively, were deemed reasonable and used in the discounted cash flow analysis. In addition, we assumed \$65,000 (Castaic Lake 1) and \$280,000 (Castaic Lake 2) inverter major maintenance expenses in the discount cash flow.

Further, the annual insurance expenses in the FM for Castaic Lake I and Castaic Lake II are approximately \$3,000 and \$12,000 with a 2.0% annual escalation. We believe the total insurance expenses to be reasonable based on our experience with similar assets in the community solar industry. We also assumed \$5,000 and \$10,000 of administration/other expense for Castaic Lake 1 and Castaic Lake 2 Systems.

Lastly, there are no property taxes associated with the Systems at the PPA offtaker level. Property taxes for certain type solar projects fall under California State law (under Section 73 of the California Revenue and Taxation Code). Since 1999, including a 2008 amendment, the initial construction of certain types of solar projects are exempt from property taxes by an owner-builder in the initial solar project construction of a new building.

## Depreciation & Amortization

As the valuation of the Systems is for the determination of Fair Market Value and there is a hypothetical transaction, it is appropriate to consider the allocation of Fair Market Value across the federal tax categories of the underlying assets of the Systems. Depreciation and amortization are not a cash expenditures but are a deduction in calculating taxable income and affect after tax cash flow. As such, depreciation and amortization are deducted from taxable income before considering the income tax that must be paid, and then added back since no cash was expended.

It is evident that solar panels, inverters, and other equipment are integral to the Systems and are tangible assets and be subject to tax depreciation for tax purposes. However, there are contracts integral to the Systems, which could drive System value and would be ascribed to Section 197 tax amortization. As such, consideration was given, such as O&M Agreement, PPA, and other. The valuation assumed 80% 5-Year MACRS allocation and the remaining value of the asset base were ascribed to 15-Year SL.

Under the Tax Cut and Jobs Act, property acquired and placed in service after September 27, 2017 is eligible for 100% expensing in Year 1. Investors, specific to this Transaction, may not elect to utilize this incentive, but typical market participants would price the Project with consideration to all tax benefits available to both parties. As this would represent the highest and best use regarding the incentive, 5-Year MACRS is eligible for bonus depreciation and is utilized in the valuation analysis.



<sup>&</sup>lt;sup>11</sup> Lazard's Levelized Cost of Energy Analysis – Version 14.0. Lazard. October 2020

#### Income Taxes

Income tax was then deducted from the income in determining cash flows. The analysis utilized income tax payments that reflect blended effective rates comprising the marginal tax rate for federal (21.0%) and state (8.84%) income taxes. The calculated composite tax rate for the Systems is 27.98%.

#### Salvage Value

The salvage values of the System upon the expiration of its REUL is projected. The resulting life (EUL) determines the period of sale for any System salvage value, as well as the end of full utilization. For this purpose, refer to the End of PPA subsection above.

#### Invested Capital (Debt-Free) Net Cash Flows

Based on the preceding assumptions, the projected DFNCF of the Systems is computed. The next step in the discounted cash flow method was to determine a discount rate in order to discount the projected net cash flows to present value.

#### Discount Rate

The discount rate applied to the invested capital net cash flow in the Income Approach analysis mathematically expresses perceived risk. Perceived risk represents the uncertainty related to achievement of the forecasted earnings levels.

In examining an investment situation an investor would weigh the perceived levels of business and financial risk against the return expected from the investment. The discount rate utilized in this analysis was the weighted average cost of capital ("WACC") for companies engaged in the electric power industry, representing the market rate for a similar solar generating project. It is the rate of return required to compensate an investor for undertaking an investment in each System. The equation for the WACC is as follows:

Weighted Average Cost of Capital								
WACC	=	[ Kd x %D x (1 - T) ] + [ Ke x %E ]						
Where: Kd	=	Cost of Debt Capital						
%D	=	Proportion of Debt to Total Capital						
Ke	=	Cost of Equity Capital						
%E	=	Proportion of Equity to Total Capital						
T	=	Marginal Tax Rate						

The rate of return on debt capital (Kd) is the current rate that an investor would pay for long-term debt capital to finance the project. Please refer to Exhibit D for the yield on Baa-rated corporate bonds near the date of the report, which was assumed for the cost of debt capital for the Systems. The Tax Cuts and Jobs Act of 2017 imposed § 163(j) Business Interest Expense Limitations that affect business interest deductibility. § 163(j) limits deductible interest expense annually to 50% of income thresholds (for 2019 and 2020 under the CARES Act and, then, going back to 30%

under prior tax law), with allowance for indefinite carry forwards. The WACC analysis provided in this Report reflects consideration for an estimated upward effect on the concluded Kd.

The proportion of debt capital to total capital (%D) is the target degree of capital structure leverage. It represents the optimal long-term capital structure of the industry, based on an analysis of the capital structures for the guideline companies or companies engaged in the electric power industry.

The marginal tax rate (T) reflects the interest tax shield on debt, and it was estimated at an average effective blended corporate and state tax rate. Please refer to Exhibit B.

The rate of return on equity capital (Ke) is a function of the systematic and unsystematic risks of a particular security or business asset. Systematic risk is risk associated with stocks in general and cannot be eliminated in a diversified portfolio. It is considered to reflect the risks of the economy as a whole. The components of systematic risk include a risk-free rate of return plus a risk premium for holding common stock versus risk-free government bonds. Unsystematic risk, or specific risk, is associated with a particular security or business asset and can be eliminated in a diversified portfolio. It is considered to reflect risk unique to the business or asset.

The cost of equity was estimated using the Capital Asset Pricing Model ("CAPM"), modified to account for specific risk. The CAPM is a well-known financial model that evaluates the risk of a particular security relative to the systematic risk of a market portfolio of stocks.

The CAPM equation is summarized as follows:

Cost of Equity based on CAPM							
Ke	=	$Rf + (\beta x Rp) + Ru$					
Where: Ke	=	Cost of Equity (or Required Rate of Return on Equity)					
Rf	=	Risk-Free Rate of Return					
β	=	Beta					
Rp	=	Common Stock Risk Premium					
Ru	=	Unsystematic or Additional Risk Premium					

In the CAPM, M&S utilized a normalized yield to maturity of long-term (20-year) government bonds of 2.5% for the risk-free rate of return (Rf). The normalized rate, which reflects the 10-year average, is considered appropriate given the March 2020 rate cut to zero percent in response to the severe economic downturn ignited by the COVID-19 crisis.

Beta (B) is a statistical measure that evaluates the risk of a particular security relative to the systematic risk of a market portfolio of stocks. The beta (B) of a stock is computed by regressing the returns from that stock in excess of the risk-free rate with the returns for a market portfolio of stocks in excess of the risk-free rate. An appropriate beta for a business can be derived from analysis of publicly traded companies engaged in similar lines of business. The median beta for the guideline company data in the electric power industry was selected. Refer to Exhibit B.

The risk premium (Rp) is the return on the market in excess of the risk-free rate (Rf). Based on the Duff & Phelps's Long-Horizon Expected Equity Risk Premium from 1926-2019, the equity risk premium observed from the analysis of publicly traded stock returns is 6.17%. As such, an equity risk premium of 6.17% for the subject project was selected.

There is no specific model or formula for quantifying the effect of investment-specific (unsystematic) risk factors on the discount rate. It is noteworthy that the analysis may lead to the conclusion that the subject Systems is less risky than the industry averages, in which case the investment-specific risk adjustment may reduce the discount rate. Nevertheless, we have considered the Duff & Phelps's Long-Horizon Microcap (9-10 decile) percentile Risk Premium 2020 size premium of 3.16%, appropriate for the subject project investment-specific risk premium.

Lastly, the analysis applies a Market Risk Premium adjustment. This adjustment reflects adjustment to the WACC to return rates observed in private market transactions. Market extracted return rates reflect that the renewable energy investment market has matured and broadened, capital is continuing to be attracted to the contracted renewable energy assets, foreign investment has been attracted to the asset class, the Tax Cuts and Jobs Act of 2017 reduced corporate and personal income tax rates and positively influencing asset valuations that have cash income streams generated by the asset class. A 1.00% market risk adjustment was reflected. Refer to Exhibit B for more detail.

We believe a discount rate of 6.0% (rounded) is appropriate to discount the expected invested capital net cash flows of the Systems received for revenue generated from the contracted agreements. Overall, we deemed this rate to fairly reflect the risk associated with the successful achievement of the projected contracted cash flows of the Systems.

## **Income Approach Conclusion**

The projected DFNCF were discounted to present value to account for the return expectations of a prudent investor. The DFNCF were discounted to present value assuming they are received, on average, midway through the period of the projection.

Based on the application of the income approach, the FMV of the Systems as of the Valuation Date are provided below. Refer Exhibit A for additional cash flow detail.

Income Approach Indication						
System Income Approach \$/W						
Castaic Lake 1	\$2,201,000	\$2.05				
Castaic Lake 2	\$13,266,000	\$3.03				

#### **Fair Market Value Conclusion**

In determining the final opinion of the FMV of the Systems, only the income approach was utilized in the valuation. In this case, given that the Systems have been operational as of the Valuation Date, the income approach provides a proven income-generating history which is highly indicative of FMV. Thus, the Fair Market Value in continued use of the Systems, as of the Valuation Date, is provided below.

Fair Market Value Conclusion						
System Fair Market Value \$/W						
Castaic Lake 1	\$2,201,000	\$2.05				
Castaic Lake 2	\$13,266,000	\$3.03				

#### IX. SUMMARY OF CONCLUSIONS

Based on the investigation, experience and analyses summarized in this Report, and subject to the following assumptions and limiting conditions and general service conditions, it is M&S's opinion as of the Valuation Date that the Fair Market Value of the Systems is:

Fair Market Value Conclusion					
System Fair Market Value					
Castaic Lake 1	\$2,201,000	\$2.05			
Castaic Lake 2	\$13,266,000	\$3.03			

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#### X. ASSUMPTIONS AND LIMITING CONDITIONS

No responsibility is assumed for matters legal in nature. No investigation has been made of the title to, or any liabilities against, the property appraised. In the appraisal it is presumed, unless otherwise noted, that the owner's claim is valid, the property rights are good and marketable, and there are no encumbrances which cannot be cleared through normal processes.

It is assumed that the Systems have continually been and will continue to be maintained in good operating condition, with normal preventative maintenance performed and that the equipment is currently in use and in normal working condition.

Even with proper preventative maintenance, cleaning, and replacement of component parts as required by the original equipment manufacturer, equipment will eventually show signs of wear, requiring possible service ranging from a minor reconditioning to a major refurbishing. The duration between these periods of downtime is a function of maintenance, working conditions, operator diligence and surveillance, and overall equipment design.

#### Title to the Assets

No investigation of legal title was made, and M&S renders no opinion as to the ownership of the equipment or condition of the title. M&S assumes:

- a) The title to the equipment is marketable;
- b) Unless otherwise indicated in this Report, the Systems are free and clear of all liens, encumbrances, and restrictions;
- c) The Systems do not exist in violation of any applicable codes, ordinances, statutes, or other government regulations.

#### **Information and Data**

Information supplied by others that was considered in this valuation is from sources M&S believes are reliable. While M&S has reviewed such information supplied by others and have performed due inquiry, M&S does not make any representation for accuracy. M&S reserves the right to make such adjustments to the analyses herein reported as may be required by consideration of additional or more reliable data that may become available.

#### **Date of Valuation**

The appraiser assumes no responsibility for economic or physical factors occurring subsequent to the date of valuation that may affect the opinions reported. The date of valuation to which the conclusions and opinions expressed in this Report apply is set forth above.

#### **Unexpected Conditions**

M&S assumes there are no unexpected conditions of the equipment that adversely affect value.



#### ASSUMPTIONS AND LIMITING CONDITIONS

#### Inspection

The Systems were not inspected. The appraisal was made based on information provided to us by or on behalf of the Clients.

#### **Legal or Specialized Expertise**

No opinion is intended to be expressed for matters requiring legal or specialized expertise, investigation, or knowledge beyond that customarily employed by appraisers. This Report does not address issues of law, engineering, or code conformance, unless cited specifically in this Report.

#### Sale or Purchase

All opinions of value are presented as Marshall & Stevens Incorporated's considered opinion based on the facts and data appearing in the report. M&S assumes no responsibility for changes in value and market condition or the inability of the owner to locate a purchaser at the appraised value.

#### **Court Testimony**

Testimony or attendance in court by reason of this appraisal shall not be required unless arrangements for such services have previously been made.

## **Limited Assignment**

The scope of this assignment was limited to the Systems described as part of this analysis. No consideration has been given to any additional units currently operating as part of the Client's asset list.

## **Operating Equipment**

The appraiser has assumed all the equipment to be in normal operating condition unless otherwise noted. Operating individual pieces of equipment to test their status is beyond the scope of the investigation.

#### Confidentiality/Advertising

This Report and supporting notes are confidential. Neither all nor any part of the contents of this appraisal shall be copied or disclosed to any party or conveyed to the public orally or in writing through advertising, public relations, news, sales, or in any other manner without the prior written consent and approval of both Marshall & Stevens and its client.

#### **Inventories**

Inventories were not considered a part of the equipment for the purpose of this Report and are not included in the valuation.

#### **Spare Parts**

Spare parts were not included based on client-supplied information.



#### ASSUMPTIONS AND LIMITING CONDITIONS

#### **Hazardous Substances**

Hazardous substances, if present within the Systems, can introduce an actual or potential liability that will adversely affect the marketability and value of the equipment. Such liability may be in the form of immediate recognition of existing hazardous conditions. Future liability could stem from the release of currently nonhazardous contaminants. In the development of M&S's opinion of value, no consideration has been given to such liability or its impact on value.

## **EXHIBIT A**

## **VALUATION DATE FAIR MARKET VALUE**

PPA Phase I- Castaic Lake 1										
Valuation for GSRP & Others.										
Discounted Cash Flow Valuation Method										
Valuation As of January 31, 2021										
Year Number	1	2	3	4	5	6	7	8	9	10
Year beginning January 31, 2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Power Generation										
Generation (MWh)	2,091	2,080	2,070	2,060	2,049	2,039	2,029	2,019	2,009	1,999
Degradation	, · · · -	-0.50%	-0.50%	-0.50%	-0.50%	-0.50%	-0.50%	-0.50%	-0.50%	-0.50%
Total Power Generation	2,091	2,080	2,070	2,060	2,049	2,039	2,029	2,019	2,009	1,999
Energy Prices										
PPA Rate (\$/MWh)	125.48	127.99	130.55	133.17	135.83	138.55	141.32	144.14	147.03	149.97
Revenues										
PPA Revenue	262,372	266,282	270,249	274,276	278,363	282,510	286,720	290,992	295,327	299,728
Total Revenues	262,372	266,282	270,249	274,276	278,363	282,510	286,720	290,992	295,327	299,728
Operating Expenses										
Scheduled O&M	4,354	4,442	4,530	4,621	4,713	4,808	4,904	5,002	5,102	5,204
Unscheduled O&M	10,709	10,709	10,709	10,709	10,709	10,709	10,709	10,709	10,709	10,709
Insurance	3,000	3,060	3,121	3,183	3,247	3,312	3,378	3,446	3,515	3,585
Other	5,000	5,125	5,253	5,384	5,519	5,657	5,798	5,943	6,092	6,244
Inverter Major Maintenance	-	-	-	-	-	65,000	-	-	-	-
Total Operating Expenses	23,063	23,335	23,613	23,898	24,189	89,486	24,790	25,100	25,418	25,742
Earnings Before Int., Taxes, Depreciation, & Amort.	239,309	242,946	246,636	250,378	254,174	193,024	261,930	265,892	269,910	273,986
EBITDA Margin	91.2%	91.2%	91.3%	91.3%	91.3%	68.3%	91.4%	91.4%	91.4%	91.4%
Less:										
Depreciation of the Facility	1,881,844	22,021	22,021	22,021	22,021	22,021	22,021	21,988	22,021	21,988
Pretax Income	(1,642,535)	220,925	224,615	228,357	232,153	171,003	239,909	243,904	247,889	251,998
Income Taxes at 27.98%	(459,581)	61,815	62,847	63,894	64,956	47,847	67,127	68,244	69,359	70,509
Net Income	(1,182,954)	159,110	161,768	164,463	167,197	123,157	172,783	175,659	178,530	181,489
Less:										
Working Capital	4,000	-	-	-	-	11,000	(11,000)	-	-	-
Plus:										
Depreciation of the Facility Salvage Value	1,881,844	22,021	22,021	22,021	22,021	22,021	22,021	21,988	22,021	21,988
•										
Net Debt-Free Cash Flow	\$694,890	\$181,131	\$183,789	\$186,484	\$189,218	\$134,178	\$205,804	\$197,647	\$200,551	\$203,477
Present Value Factor at 6% Present Value of Cash Flow	0.9713 \$674,947	0.9163 \$165,971	0.8644 \$158,867	0.8155 \$152,077	0.7693 \$145,565	0.7258 \$97,386	0.6847 \$140,914	0.6460 \$127,680	0.6094 \$122,215	0.5749 \$116,979
Present Value	\$2,201,263									
Indicated Value (rounded)	\$2,201,203									
maioarea varae (rounded)	\$2,201,000									

Note: Some totals may not add due to rounding.

PPA Phase I- Castaic Lake 1 Valuation for GSRP & Others.	
Discounted Cash Flow Valuation Method	
Valuation As of January 31, 2021	
Year Number Year beginning January 31, 2021	11 <b>2032</b>
Year beginning January 31, 2021	2032
Power Generation	
Generation (MWh)	1,989
Degradation	-0.50%
Total Power Generation	1,989
Energy Prices	
PPA Rate (\$/MWh)	152.97
Revenues	204.104
PPA Revenue Total Revenues	304,194 304,194
Total Revenues	304,194
Operating Expenses Scheduled O&M	5,308
Unscheduled O&M	10,709
Insurance	3,657
Other	6,400
Inverter Major Maintenance	-
Total Operating Expenses	26,074
Earnings Before Int., Taxes, Depreciation, & Amort.	278,120
EBITDA Margin	91.4%
Less:	
Depreciation of the Facility	121,033
Pretax Income	157,087
Income Taxes at 27.98%	43,953
Net Income	113,134
Less:	,
Working Capital	(4,000)
Plus: Depreciation of the Facility	121,033
Salvage Value	400,000
Net Debt-Free Cash Flow	\$638,167
Present Value Factor at 6%	0.4680
Present Value of Cash Flow	\$298,662

Present Value Indicated Value (rounded)

Note: Some totals may not add due to rounding.

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PPA Phase 2- Castaic Lake 2										
Valuation for GSRP & Others.										
Discounted Cash Flow Valuation Method										
Valuation As of January 31, 2021										
Year Number	1	2	3	4	5	6	7	8	9	10
Year beginning January 31, 2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Power Generation										
Generation (MWh)	8,629	8,586	8,543	8,500	8,458	8,415	8,373	8,331	8,290	8,248
Degradation (WWII)	3,027	-0.50%	-0.50%	-0.50%	-0.50%	-0.50%	-0.50%	-0.50%	-0.50%	-0.50%
Total Power Generation	8.629	8,586	8,543	8,500	8,458	8,415	8,373	8,331	8,290	8,248
Energy Prices										
PPA Rate (\$/MWh)	128.38	130.95	133.57	136.24	138.97	141.74	144.58	147.47	150.42	153.43
Blended Avg. Price	128.38	130.95	133.57	136.24	138.97	141.74	144.58	147.47	150.42	153.43
Revenues										
PPA Revenue	1,107,791	1,124,297	1,141,049	1,158,051	1,175,306	1,192,818	1,210,591	1,228,629	1,246,935	1,265,514
Total Revenues	1,107,791	1,124,297	1,141,049	1,158,051	1,175,306	1,192,818	1,210,591	1,228,629	1,246,935	1,265,514
Operating Expenses										
Scheduled O&M	20,477	20,887	21,304	21,730	22,165	22,608	23,060	23,522	23,992	24,472
Unscheduled O&M	23,385	23,385	23,385	23,385	23,385	23,385	23,385	23,385	23,385	23,385
Insurance	12,234	12,478	12,728	12,982	13,242	13,507	13,777	14,053	14,334	14,620
Other	10,000	10,250	10,506	10,769	11,038	11,314	11,597	11,887	12,184	12,489
Inverter Major Maintenance	10,000	10,230	10,500	10,709	11,036	11,314	11,397	11,007	280,000	12,409
Total Operating Expenses	66,096	67,000	67,923	68,867	69,830	70,814	71,819	72,846	353,895	74,966
Total Operating Expenses	00,070	07,000	07,923	00,007	09,830	70,014	/1,019	72,640	333,693	74,500
Earnings Before Int., Taxes, Depreciation, & Amort.	1,041,695	1,057,297	1,073,126	1,089,184	1,105,476	1,122,004	1,138,771	1,155,783	893,040	1,190,549
EBITDA Margin	94.0%	94.0%	94.0%	94.1%	94.1%	94.1%	94.1%	94.1%	71.6%	94.1%
1										
Less:	11,342,364	132,726	132,726	132,726	132,726	132,726	132,726	132,527	132,726	122 527
Depreciation of the Facility Pretax Income		924,571	940,399		972,749	989,277	1,006,045	1,023,255	760,314	132,527 1,058,021
Pretax Income	(10,300,668)	924,371	940,399	956,458	972,749	989,277	1,006,045	1,023,255	/60,314	1,058,021
Income Taxes at 27.98%	(2,882,127)	258,695	263,124	267,617	272,175	276,800	281,491	286,307	212,736	296,034
Net Income	(7,418,541)	665,876	677,276	688,841	700,574	712,477	724,554	736,948	547,578	761,987
Less:										
Working Capital	11,000	_	_	_	_	_	_	_	47,000	(46,000)
Plus:	,								,	(,)
Depreciation of Capital Expenditures	_	_	_	_	_	_	_	_	_	_
Depreciation of the Facility	11,342,364	132,726	132,726	132,726	132,726	132,726	132,726	132,527	132,726	132,527
Salvage Value						-		-		-
Net Debt-Free Cash Flow	62 012 922	\$798,602	6910.002	6021 567	6922 200	6945 204	6057 200	\$960.476	8622 205	\$940,514
Present Value Factor at 6%	\$3,912,822 0.9713	0.9163	\$810,002 0.8644	\$821,567 0.8155	\$833,300 0.7693	\$845,204 0.7258	\$857,280 0.6847	\$869,476 0.6460	\$633,305 0.6094	0.5749
Present Value of Cash Flow	\$3,800,524	\$731,759	\$700,166	\$669,988	\$641,058	\$613,449	\$586,980	\$561,681	\$385,936	\$540,702
riesent value of Cash Flow	\$5,800,524	\$/31,/39	\$700,100	\$009,988	\$041,038	3013,449	\$386,980	\$301,081	\$383,930	\$540,702
Present Value	\$13,266,336									

Note: Some totals may not add due to rounding.

Indicated Value (rounded)

\$13,266,000

EBITDA Margin 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1% 94.1	PPA Phase 2- Castaic Lake 2									
National Part	Valuation for GSRP & Others.									
New Number   11										
Power Generation   Power Gener										
Power Generation   Superior Generation   Superior Generation (MVN)										
Secretarion (Λ/Wh)   S.207   S.166   S.125   S.084   S.044   S.044   7.944   7.944   7.848   7.048   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049	Year beginning January 31, 2021	2032	2033	2034	2035	2036	2037	2038	2039	2040
Secretarion (Λ/Wh)   S.207   S.166   S.125   S.084   S.044   S.044   7.944   7.944   7.848   7.048   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049   7.049	Power Generation									
Degration   Deg		8 207	8 166	8 125	8 084	8 044	8 004	7 964	7 924	7 884
Toal Power Generation 8,207 8,166 8,125 8,084 8,044 8,004 7,964 7,924 7,824 7,824   Energy Prices   PPA Rate (SNIW)) 156.50 159.63 162.82 166.08 169.40 172.79 176.24 179.77 183.36   Blended Axy Price   1284.371 1,303.508 1,322.910 1,42.642 1,362.647 1,382.950 1,405.56 1,423.469 1,445.694   PPA Rate (SNIW) 1,303.508 1,322.910 1,42.642 1,362.647 1,382.950 1,405.56 1,423.469 1,445.694   PPA Revenue										
PA Rate (SAWH)   156.9   159.6   159.6   162.8   160.08   169.40   172.79   176.24   179.77   183.36   180.00   180.00   172.79   176.24   179.77   183.36   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.0										
PA Rate (SAWH)   156.9   159.6   159.6   162.8   160.08   169.40   172.79   176.24   179.77   183.36   180.00   180.00   172.79   176.24   179.77   183.36   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.00   180.0	Energy Prices									
Revenues PPA Revenue 1284.371 1,303.508 1,322.930 1,342.642 1,362.647 1,382.950 1,403.556 1,424.469 1,445.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.694 1,704.		156.50	159.63	162.82	166.08	169.40	172.79	176.24	179.77	183.36
PAR Newmer   1,284,371   1,303,508   1,322,90   1,342,642   1,362,647   1,382,950   1,403,556   1,424,469   1,445,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,456,694   1,45	Blended Avg. Price	156.50	159.63	162.82	166.08	169.40	172.79	176.24	179.77	183.36
Total Revenues										
Operating Expenses	PPA Revenue									
Scheduled O&M         24,961         25,461         25,970         26,489         27,019         27,559         28,111         28,673         29,246           Unscheduled O&M         23,385         23,385         23,385         23,385         23,385         23,385         23,385         23,385         23,385         23,385         23,385         23,385         23,385         23,385         23,385         23,385         23,385         23,385         23,385         23,385         23,385         23,385         23,385         23,385         23,385         23,385         23,385         23,385         23,385         23,385         23,385         23,385         23,385         23,385         23,385         23,385         23,385         23,385         23,385         23,385         23,385         23,385         23,385         23,385         23,385         23,385         23,385         23,385         23,385         23,385         23,385         23,385         23,385         23,385         23,385         23,385         23,385         23,385         23,385         23,385         23,385         23,385         23,385         23,385         23,385         23,385         23,385         23,385         23,385         23,385         23,385         23,385	Total Revenues	1,284,371	1,303,508	1,322,930	1,342,642	1,362,647	1,382,950	1,403,556	1,424,469	1,445,694
Unscheduled O&M										
Insurance   14,913   15,211   15,515   15,825   16,142   16,465   16,794   17,130   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473   17,473										
Other Inverter Major Maintenance         12,801         13,121         13,449         13,785         14,130         14,483         14,845         15,216         15,597           Inverter Major Maintenance         76,060         77,177         78,319         79,485         80,676         81,892         83,135         84,404         85,700           Earnings Before Int., Taxes, Depreciation, & Amort.         1,208,311         1,226,330         1,244,611         1,263,157         1,281,971         1,310,058         1,320,422         1,340,066         1,359,994           EBITDA Margin         94,1%         94,1%         94,1%         94,1%         94,1%         94,1%         94,1%         94,1%         94,1%         94,1%         94,1%         94,1%         94,1%         94,1%         94,1%         94,1%         94,1%         94,1%         94,1%         94,1%         94,1%         94,1%         94,1%         94,1%         94,1%         94,1%         94,1%         94,1%         94,1%         94,1%         94,1%         94,1%         94,1%         94,1%         94,1%         94,1%         94,1%         94,1%         94,1%         94,1%         94,1%         94,1%         94,1%         94,1%         94,1%         94,1%         94,1%         94,1%										
Total Operating Expenses   Total Operating Expension of Capital Expenditures   Total Operating Expension Ex										
Total Operating Expenses			13,121	13,449	13,785	14,130		14,845	15,216	15,597
Earnings Before Int., Taxes, Depreciation, & Amort.  1,208,311 1,226,330 1,244,611 1,263,157 1,281,971 1,301,058 1,320,422 1,340,066 1,359,994 1,064,166 1,359,994 1,065 1,075,584 1,093,803 1,111,885 1,130,630 1,149,245 1,234,795 1,320,422 1,340,066 1,359,994 1,066 1,359,994 1,066 1,359,994 1,066 1,359,994 1,066 1,359,994 1,066 1,359,994 1,066 1,359,994 1,066 1,359,994 1,066 1,359,994 1,066 1,359,994 1,066 1,359,994 1,066 1,359,994 1,066 1,359,994 1,066 1,359,994 1,066 1,359,994 1,066 1,359,994 1,066 1,359,994 1,066 1,359,994 1,066 1,359,994 1,066 1,359,994 1,066 1,359,994 1,066 1,359,994 1,066 1,359,994 1,066 1,359,994 1,066 1,359,994 1,066 1,359,994 1,066 1,359,994 1,066 1,359,994 1,066 1,359,994 1,066 1,359,994 1,066 1,359,994 1,066 1,359,994 1,066 1,359,994 1,066 1,359,994 1,066 1,359,994 1,066 1,359,994 1,066 1,359,994 1,066 1,359,994 1,066 1,359,994 1,066 1,359,994 1,066 1,359,994 1,066 1,359,994 1,066 1,359,994 1,066 1,359,994 1,066 1,359,994 1,066 1,359,994 1,066 1,359,994 1,066 1,359,994 1,066 1,359,994 1,066 1,359,994 1,066 1,359,994 1,066 1,359,994 1,066 1,359,994 1,066 1,359,994 1,066 1,359,994 1,066 1,359,994 1,066 1,359,994 1,066 1,359,994 1,066 1,359,994 1,066 1,359,994 1,066 1,359,994 1,066 1,359,994 1,066 1,359,994 1,066 1,359,994 1,066 1,359,994 1,066 1,359,994 1,066 1,359,994 1,066 1,359,994 1,066 1,359,994 1,066 1,359,994 1,066 1,359,994 1,066 1,359,994 1,066 1,359,994 1,066 1,359,994 1,066 1,359,994 1,066 1,359,994 1,066 1,359,994 1,066 1,359,994 1,066 1,359,994 1,066 1,359,994 1,066 1,359,994 1,066 1,359,994 1,066 1,359,994 1,066 1,359,994 1,066 1,359,994 1,066 1,359,994 1,066 1,359,994 1,066 1,359,994 1,066 1,359,994 1,066 1,359,994 1,066 1,359,994 1,066 1,359,994 1,066 1,359,994 1,066 1,359,994 1,066 1,359,994 1,066 1,359,994 1,066 1,359,994 1,066 1,359,994 1,066 1,359,994 1,066 1,359,994 1,066 1,359,994 1,066 1,359,994 1,066 1,359,994 1,066 1,359,994 1,066 1,359,994 1,066 1,359,994 1,066 1,369,994 1,066 1,369,994 1,066 1,369,994 1,066 1,369,994 1,066 1,369,994 1,066 1,369,994 1,066 1,369				-	-	-		-	-	-
Less:	Total Operating Expenses	76,060	77,177	78,319	79,485	80,676	81,892	83,135	84,404	85,700
Less:  Depreciation of the Facility  132,726  132,527  132,726  132,527  132,726  132,727  132,726  132,727  132,726  1,324,795  1,320,422  1,340,066  1,359,994  Income Taxes at 27.98%  Income Taxes at 27.98%  Income Taxes at 27.98%  Net Income  300,949  306,046  774,636  787,757  800,779  814,279  814,279  827,686  889,299  827,686  889,299  950,968  965,115  979,467  Less:  Working Capital  Plus:  Depreciation of Capital Expenditures  Depreciation of Taxes at 27.98%  132,726  132,726  132,727  132,726  132,727  132,726  132,727  132,726  132,727  132,726  132,727  132,726  132,727  132,726  132,727  132,726  132,727  132,726  132,727  132,726  132,727  132,726  132,727  132,726  132,727  132,726  132,727  132,726  132,727  132,726  132,727  132,726  132,727  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,728  132,72	Earnings Before Int., Taxes, Depreciation, & Amort.	1,208,311	1,226,330	1,244,611	1,263,157	1,281,971	1,301,058	1,320,422	1,340,066	1,359,994
Depreciation of the Facility   132,726   132,727   132,726   132,727   132,726   66,264   -   -   -   -   -	EBITDA Margin	94.1%	94.1%	94.1%	94.1%	94.1%	94.1%	94.1%	94.1%	94.1%
Pretax Income         1,075,584         1,093,803         1,111,885         1,130,630         1,149,245         1,234,795         1,320,422         1,340,066         1,359,994           Income Taxes at 27.98%         300,949         306,046         311,105         316,350         321,559         345,496         369,454         374,950         380,526           Net Income         774,636         787,757         800,779         814,279         827,686         889,299         950,968         965,115         979,467           Less:         Working Capital         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         <	Less:									
Recome Taxes at 27.98%   300,949   306,046   311,105   316,350   321,559   345,496   369,454   374,950   380,526     Net Income Taxes at 27.98%   774,636   787,757   800,779   814,279   827,686   889,299   950,968   965,115   979,467     Less:   Working Capital   (12,000)     Plus:	Depreciation of the Facility							-	-	-
Net Income 774,636 787,757 800,779 814,279 827,686 889,299 950,968 965,115 979,467  Less:  Working Capital	Pretax Income	1,075,584	1,093,803	1,111,885	1,130,630	1,149,245	1,234,795	1,320,422	1,340,066	1,359,994
Less: Working Capital Plus:  Depreciation of Capital Expenditures Depreciation of the Facility Salvage Value  Net Debt-Free Cash Flow Solvage Value  \$\begin{array}{cccccccccccccccccccccccccccccccccccc										380,526
Working Capital         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -	Net Income	774,636	787,757	800,779	814,279	827,686	889,299	950,968	965,115	979,467
Plus:  Depreciation of Capital Expenditures  Depreciation of the Facility 132,726 132,726 132,726 132,726 132,727 132,726 132,726 132,726 66,264 1,000,000  Net Debt-Free Cash Flow  S907,362 S90										
Depreciation of Capital Expenditures		-	-	-	-	-	-	-	-	(12,000)
Salvage Value 1,000,000  Net Debt-Free Cash Flow	Depreciation of Capital Expenditures	-	-	-	-	-	-	-	-	-
Net Debt-Free Cash Flow \$907,362 \$920,284 \$933,506 \$946,807 \$960,413 \$955,563 \$950,968 \$965,115 \$1,991,467 Present Value Factor at 6% 0.5424 0.5117 0.4827 0.4554 0.4296 0.4053 0.3823 0.3607 0.3403		132,726	132,527	132,726	132,527	132,726	66,264	-	-	-
Present Value Factor at 6% 0.5424 0.5117 0.4827 0.4554 0.4296 0.4053 0.3823 0.3607 0.3403	Salvage Value	-	-	-	-	-	-	-	<u>-</u>	1,000,000
Present Value Factor at 6% 0.5424 0.5117 0.4827 0.4554 0.4296 0.4053 0.3823 0.3607 0.3403	Net Debt-Free Cash Flow	\$907,362	\$920,284	\$933,506	\$946,807	\$960,413	\$955,563	\$950,968	\$965,115	\$1,991,467
Present Value of Cash Flow \$492,153 \$470,909 \$450,603 \$431,176 \$412,593 \$387,290 \$363,555 \$348,117 \$677,696	Present Value Factor at 6%									
	Present Value of Cash Flow	\$492,153	\$470,909	\$450,603	\$431,176	\$412,593	\$387,290	\$363,555	\$348,117	\$677,696

Present Value Indicated Value (rounded)

Note: Some totals may not add due to rounding.

# **EXHIBIT B**

# WEIGHTED AVERAGE COST OF CAPITAL

Guideline Company Name	Ticker	ok Value Debt (1)	of P	k Value referred uity (1)	ket Value quity (2)		ket Value al Capital	Debt-to- Capital	Equity-to- Capital	Levered Equity Beta	Unlevered Equity Beta (3)	Relevered Equity Beta (4)
Utility												
American Electric Power Company, Inc.	AEP	\$ 33,391	\$	-	\$ 39,944	\$	73,336	45.5%	54.5%	0.21	0.14	0.22
Dominion Energy, Inc.	D	\$ 38,925	\$	2,387	\$ 58,804	\$	100,116	41.3%	58.7%	0.31	0.21	0.34
Edison International	EIX	\$ 22,850	\$	-	\$ 23,419	\$	46,269	49.4%	50.6%	0.54	0.32	0.53
Entergy Corporation	ETR	\$ 22,061	\$	-	\$ 19,072	\$	41,133	53.6%	46.4%	0.49	0.27	0.44
Pinnacle West Capital Corporation	PNW	\$ 6,822	\$	-	\$ 8,844	\$	15,666	43.5%	56.5%	0.25	0.16	0.27
The Southern Company	SO	\$ 51,935	\$	-	\$ 63,015	\$	114,950	45.2%	54.8%	0.39	0.25	0.41
Duke Energy Corporation	DUK	\$ 65,624	\$	1,962	\$ 67,789	\$	135,375	49.9%	50.1%	0.22	0.13	0.22
PPL Corporation	PPL	\$ 24,236	\$	-	\$ 21,965	\$	46,201	52.5%	47.5%	0.75	0.42	0.69
						Aver	ige	47.6%	52.4%	0.39	0.24	0.39
						Medi	an	47.5%	52.5%	0.35	0.23	0.37
						Selec	ted	47.0%	53.0%			0.37

B-1

	Utility	Source:
Risk-Free Rate	2.50%	Normalized Risk-Free Rate (Duff & Phelps Technical Update June 2020).
Equity Risk Premium	6.17%	Duff & Phelps's Long-Horizon Expected Equity Risk Premium (supply-side) from 1926-2019
Relevered Equity Beta	0.37	Based on the selected guideline public company relevered equity beta.
Cost of Equity Capital	4.78%	Cost of Equity Capital = Risk free Rate + [Equity Beta x Equity Risk Premium]
Unsystematic Risk Factors:		
Size Premium	3.16%	Source: 2019 Valuation Handbook, Duff & Phelps
Market Risk Adjustment	1.00%	Subject Asset market adjustment (M&S Estimated)
Cost of Equity Capital	8.94%	
Debt:		
Subject's Estimated Cost of Debt Capital	3.78%	Based on S&P Capital IQ BBB Corporate Yields as of the valuation date
Interest Deductibility Adjustment	0.04%	Section 163(j) Interest Expense Deductibility Limitation Adjustment (M&S Estimated)
Tax Rate	27.98%	Based on the effective federal and state tax rate
After-Tax Cost of Debt	2.75%	
Debt-to-Capital	47.00%	Based on the selected guideline public company debt-to-capital ratio
Equity-to-Capital	53.00%	Based on the selected guideline public company equity-to-capital ratio
Weighted Average Cost of Capital (WACC)	6.03%	WACC = [(Debt-to-Capital x Cost of Debt x (1 - Tax Rate)] + [Equity-to-Capital x Cost of Equity Capital]
Weighted Average Cost of Capital (Rounded)	6.00%	
Selected Contracted WACC	6.00%	

Santa Clarita Valley Water Agency Solar Star California XXVIII, LLC Solar Star California XXIV, LLC 22-21-25210



# **EXHIBIT C**

# **CERTIFICATION OF APPRAISERS**

### **CERTIFICATION**

# I certify that:

- To the best of my knowledge and belief, the statements of fact contained in this appraisal Report, upon which the analyses, opinions, and conclusions expressed herein are based, are true and accurate.
- The reported analyses, opinions, and conclusions are limited only by the reported assumptions and limiting conditions and are my personal, impartial, and unbiased professional analyses, opinions, and conclusions.
- I have no present or prospective interest in the property that is the subject of this Report, and I have no personal interest with respect to the parties involved.
- I have no bias with respect to the property that is the subject of this Report or to the parties involved with this assignment.
- I have performed no services, as an appraiser or in any other capacity, regarding the property that is the subject of this Report within the three-year period immediately preceding acceptance of this assignment.
- My engagement in this assignment was not contingent upon developing or reporting predetermined results.
- My compensation is not contingent on an action or event resulting from the analyses, opinions, or conclusions in, or the use of, this Report.
- To the best of my knowledge and belief, the reported analyses, opinions, and conclusions were developed, and this Report has been prepared, in conformity with the Uniform Standards of Professional Appraisal Practice and the Code of Professional Ethics.
- Data were obtained from sources believed to be reliable. All facts known to me that
  have bearing on the values of the property have been considered, and no facts of
  importance have been intentionally omitted herein.
- In addition to the undersigned Peter Soja and Elizabeth Guararra assisted in the preparation of this valuation Report.
- A personal inspection of the property that is the subject of this Report was not made.

Steven R. LaMantia, ASA

**Managing Director** 

Steven R. La mantia

# **EXHIBIT D**

# PROFESSIONAL QUALIFICATIONS



# stevens

# Steven R. LaMantia, ASA

## PRESENT POSITION

Steven R. LaMantia is a Managing Director in the Structured Finance practice at Marshall & Stevens Incorporated. He is responsible for performing and managing business and asset valuation projects for structured finance transactions, mergers, acquisitions, financial accounting, tax reporting and consulting purposes.

## **EXPERIENCE**

Mr. LaMantia has prepared valuations of businesses, debt, equity, and assets, both tangible and intangible, for a wide variety of manufacturing, including the energy, communications, distribution sectors, transportation, financial, and retail industries, as well as process and heavy industrial and service industries.

Valuations prepared by Mr. LaMantia have been utilized for the purpose of buy/sell negotiations, project finance and investment, end of lease disputes, corporate tax reporting, financial accounting, gift and estate reporting, bankruptcy, litigation support, and transaction consulting, including fairness opinions.

## **EMPLOYMENT**

Mr. LaMantia has over 35 years of valuation consulting experience including managing and performing valuation projects while at other national and international independent valuation and multi-disciplinary consulting firms.

### **EDUCATION**

Bachelor of Commerce, Finance, DePaul University (Chicago, Illinois)

## PROFESSIONAL AFFILIATIONS

American Society of Appraisers – Accredited Senior Appraiser, Business Valuation Equipment Leasing Association Business Valuation Association

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# **EXHIBIT E**

# QUALIFICATIONS OF MARSHALL & STEVENS INCORPORATED

# stevens

# **HISTORY**

The Marshall & Stevens organization was established in 1932. Founded by innovators, we have remained a firm of innovators, pioneering new concepts to provide realistic solutions to unique valuation issues. Since inception, we have grown in size, stature, and reputation.

A national leader in the field of professional appraisal and valuation consulting, Marshall & Stevens' practice encompasses all types of tangible and intangible property, serving a variety of business, tax, and financial requirements.

Members of the firm have been expert witnesses in a significant number of landmark court decisions regarding valuation issues.

## WE SERVE

Marshall & Stevens' clients include many of the nation's most distinguished corporations, institutions, and government agencies.

The firm also serves the appraisal and valuation consulting needs of individual entrepreneurs, commerce and industry, health and educational institutions, land developers, taxing authorities, and local, state, and federal governments, as well as foreign industries and governments throughout the world.

The work Marshall & Stevens prepares is regularly reviewed and accepted by national and international corporations, their law, audit, financing and insurance firms, as well as government and regulatory agencies. We are recognized for the quality of our work, independence, and the ability to substantiate our conclusions.

# WE COUNSEL

Marshall & Stevens' consultants work closely with trusted advisors, agencies and enterprises.

## ACCOUNTANTS & FINANCIAL CONSULTANTS:

Transaction consulting and due diligence, allocation of purchase price, impairment and financial reporting issues, property records and control, return on investments, and values for financing.

ATTORNEYS: Estate planning and reporting, shareholder dispute, issues of fairness and solvency, bankruptcy and restructuring, eminent domain and condemnation proceedings, ad valorem and IRC Sections 482, 861, and 6038A tax problems, as well as other tax-related services and litigation support.

BANKERS & TRUST OFFICERS: Financing valuations estate tax reporting, gift tax deductions, and difficulties evolving from stewardship of property via trust and estate services.

CORPORATE OFFICERS: Transaction consulting and due diligence, fairness and solvency opinions, allocation of purchase price, impairment testing and other financial reporting services, tax reporting valuations, financing, ESOPs, capital asset review and evaluation services, valuation of closely held stock, insurance placement, condemnation, property economics, useful life determination, and cash flow studies involving segregation of IRC Section 1245 property from the capitalized costs of buildings, as well as inbound and outbound transfer pricing analyses under IRC Section 482.

GOVERNMENT AGENCIES: Valuation of property administered by agencies of the government; eminent domain; public highways, urban renewal, public parks, and easements valuations; guidance in disposition of major facilities; and valuation consulting to state and local property assessors.

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# stevens

INSURANCE AGENTS, BROKERS, ADVISORS, & COMPANIES: Valuation of assets for insurance placement purposes, proper valuation of varying assets for rate-making purposes, and assistance at the time of casualty to prove the amount of loss.

MANAGEMENT CONSULTANTS: Feasibility studies, plant site selection, underwriters' surveys, analyses in acquisition studies, and areas where property economics become a part of the management consultant's contracted services.

# **WE VALUE**

BUSINESS ENTERPRISES, PARTIAL INTERESTS, AND EQUITY INVESTMENTS: Large, medium, and small public and private corporations, LLCs and partnerships (whole or fractional); options, futures, and other derivatives; capital stock and ESOPs.

REAL ESTATE AND IMPROVEMENTS: Industrial, commercial, and multifamily properties and developments; hotels, hospitals, schools, and institutional and public property; undeveloped acreage; farmland and ranch lands; large government tracts; land improvements such as paving, railroad sidings, and water, sewerage, and drainage systems; and property rights such as rights-of-way, easements, nonconforming use, water, air access.

INTANGIBLES: Patents, software, intellectual property, IPR&D and other technology, contracts, customer lists, licenses, franchises, trademarks, trade names, goodwill, agreements, processes, rights, subscription lists and financial instruments including auction rate securities, derivatives and interest rate swaps.

MACHINERY AND EQUIPMENT: Machinery, equipment, fixtures and furniture, special purpose facilities and processing plants, vehicles, plant piping and wiring, cranes and hoists, conveyors, signs, mobile equipment, patterns, drawings, dies, jigs, and fixtures.

OPINIONS & ADVISORY: Fairness and solvency opinions, transaction advisory and due diligence, litigation support, and corporate finance.

QUALITY VALUATION
QUALITY DECISION MAKING
INDEPENDENCE & INTEGRITY

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# **APPENDIX I**

# **INDUSTRY OVERVIEW**

#### Introduction

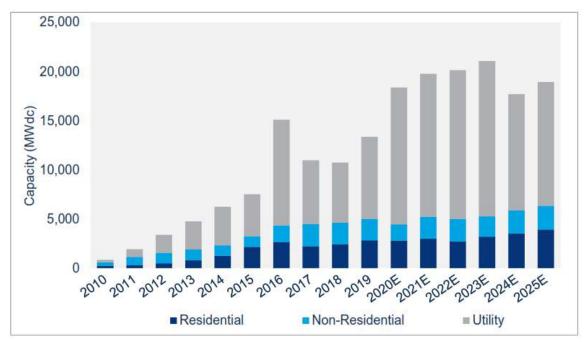
The current and future outlook of the solar power industry affects the analysis of a subject project in a variety of ways. Revenue expectations are directly correlated with power price forecasts, of which are, in turn, impacted by projected supply and demand shifts in the industry. Such shifts result from the changing composition of the various types of electric power suppliers in the industry, which can be impacted by federal subsidies and operating costs. In addition, profit margins are impacted by federal and local tax credits (if applicable) and the ability to operate at an efficient fixed cost ratio.

In order to better understand the current and future state of the solar industry as it applies to the subject project, we first review the broader solar power industry in the U.S., and the state of federal tax credits which could have a long-term impact on the operations of the subject.

# Solar Power in the U.S. – Second Quarter 2020

The U.S. solar power generation industry includes a wide variety of companies that provide a small, but growing, amount of the nation's electricity. The largest industry participants in the American solar market are SunPower, SolarCity, SunRun, and First Solar. In Q2 2020, more than 2.5 GW<sub>DC</sub> of Utility scale solar was installed, in addition to the 13.3 GW<sub>DC</sub> of solar power generation added in 2019, according to *GTM/SEIA*.

The following chart provides historical and projected installation capacity, by year and by class of installation as of the end of 2019.

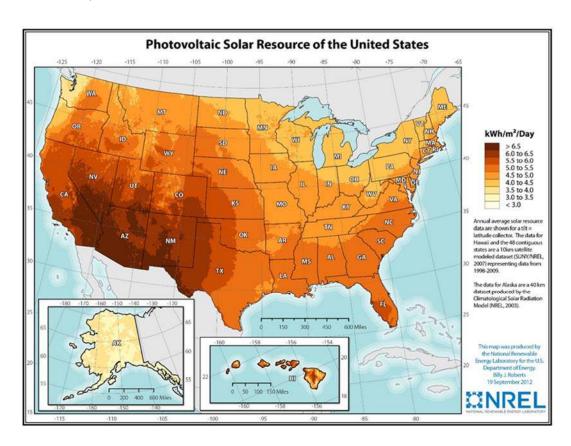


Source: GTM/SEIA Q3 2020 U.S. Solar Market Insight Report

The latest *Solar Jobs Census*<sup>12</sup> found that 249,983 Americans work in solar as of 2019. This is an increase of 5,600 jobs from 2018. The 2019 trends for solar jobs varied widely by state. Solar jobs increased in 31 states such as Florida, Georgia, Utah, New York, and Texas.

Insolation, or "incident solar radiation", is the actual amount of sunlight falling on a specific geographical location. Insolation values for a specific site are sometimes difficult to obtain. Weather stations that measure solar radiation components are located far from each other and may not carry specific insolation data for a given site. Moreover, the information most generally available is the average daily total, or global, radiation on a horizontal surface.

The insolation map below from the National Renewable Energy Laboratory ("NREL") shows the photovoltaic resource potential for the US. The darker the shading, the greater amount of solar resources available, based on data from 1998-2009.



Sunlight provides by far the largest of all carbon-neutral energy sources. More energy from sunlight strikes the earth in one hour than all the energy consumed on the planet in a year. Sunlight is a compelling solution to the need for clean, abundant sources of energy in the future. It is readily available, secure from geopolitical tension, and poses no threat to our environment through pollution or to the climate through greenhouse gases.

Santa Clarita Valley Water Agency Solar Star California XXVIII, LLC Solar Star California XXIV, LLC 22-21-25210



<sup>12</sup> https://www.thesolarfoundation.org/national/

Consensus Economics Inc., publisher of *Consensus Forecasts—USA*, reports that the consensus of U.S. forecasters believe that real GDP will grow at a seasonally adjusted annual rate of 20.1% in the third quarter of 2020 and increase by 7.1% in the fourth quarter. The forecasters expect GDP to contract 5.3% in 2020 but increase 4.0% in 2021. Wood Mackenzie forecasts a 5% contraction to U.S. GDP in 2020 in large part due to the coronavirus pandemic, according to the Q3 2020 U.S. Solar Market Insight Report.

According to EIA's Annual Energy Outlook 2019, from 2019 to 2050, projected gross domestic product (GDP) grows annually at a rate of 1.9%. "Projected energy consumption is expected to grow more slowly than gross domestic product throughout the projection period as U.S. energy efficiency continues to increase. The electricity generation mix continues to experience a rapid rate of change, with renewables the fastest-growing source of electricity generation through 2050 because of continuing declines in the capital costs for solar and wind that are supported by federal tax credits and higher state-level renewables targets. With slow load growth and increasing electricity production from renewables, U.S. coal-fired and nuclear electricity generation declines; most of the decline occurs by the mid-2020s."

The following table represents EIA's forecasted Total US Electric Power Sector Capacity from 2020-2029.

				United St	ates Power	Plant Capa	ity Projecti	ions - EIA						
Fuel	2020	Share (%)	2021	2022	2023	2024	2025	2026	2027	2028	2029	Share (%)	10-Year CARG (%)	Total Change 2019-2029
(All regions, in gigawatts, arranged by 2018 capacity)														
Coal	227.7	21%	219.6	211.3	199.2	186.9	176.3	171.0	167.4	165.3	164.8	15%	-2.90%	-63.0
Oil and Natural Gas Steam <sup>1,2</sup>	79.2	7%	72.5	70.3	68.6	65.5	64.0	60.4	59.8	59.0	57.4	5%	-2.89%	-21.8
Combined Cycle	249.4	23%	264.6	270.8	280.6	293.2	307.2	315.1	323.8	328.7	333.7	30%	2.68%	84.3
Combustion Turbine/Diesel	152.7	14%	151.3	151.8	151.6	151.9	152.6	153.4	155.2	156.1	156.0	14%	0.19%	3.3
Nuclear Power <sup>3</sup>	96.2	9%	92.9	89.3	85.9	85.9	82.7	81.6	81.6	81.6	81.6	7%	-1.48%	-14.5
Pumped Storage	22.8	2%	22.8	22.8	22.8	22.8	22.8	22.8	22.8	22.8	22.8	2%	0.00%	0.0
Diurnal Storage	0.9	0%	1.2	1.4	1.7	1.9	1.9	1.9	1.9	1.9	1.9	0%	6.91%	1.0
Fuel Cells	0.1	0%	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0%	0.06%	0.0
Renewable Sources <sup>4</sup>	241.7	23%	256.4	267.1	278.4	282.0	285.5	288.1	291.6	295.2	301.9	27%	2.04%	60.2
Distributed Generation (Natural Gas) <sup>5,6</sup>	1.5	0%	1.7	1.9	2.1	2.4	2.7	3.0	3.4	3.9	4.4	0%	9.98%	2.9
Total	1,072.3	100%	1,083.1	1,087.0	1,091.1	1,092.7	1,096.0	1,097.5	1,107.8	1,114.7	1,124.6	100%	15%	52.27
Combined Heat and Power <sup>7</sup>	30.89	3%	30.89	30.89	30.72	30.72	30.72	30.72	30.72	30.72	30.72	-	-0.05%	-0.2
Total Electric Power Sector Capacity	1,103.2	100%	1,114.0	1,117.9	1,121.8	1,123.4	1,126.7	1,128.2	1,138.5	1,145.5	1,155.3	100%	0.1	52.1

Assumptions
Total coal and oil and natural gas steam capacity account for the conversion of coal capacity to gas steam capacity, but the conversions are not included explicitly as additions or retirements.

### **Solar Installations**

As provided in the narrative, installations of 3.5 GW<sub>DC</sub> in the U.S. solar market in Q2 2020 were 52% greater than the same quarter in 2019. Utility PV comprised over 70% of capacity installed, with a record installation of 2.5 GW in total. Residential and non-residential solar saw declines from Q1 2020 totals. Through 2025, it is expected a total 83.9 GW of utility-scale solar projects will come online, almost double the amount installed over the past 10 years.



The totals reflect any conversions projected by the model.

<sup>(2)</sup> Includes oil-, gas-, and dual-fired capacity.

<sup>(3)</sup> Nuclear capacity includes 3.0 gigawatts of uprates

<sup>(4)</sup> Includes conventional hydroelectric, geothermal, wood, wood waste, all municipal waste, landfill gas, other biomass, solar, and wind power. Facilities co-firing biomass and coal are classified as coa

Primarily peak-load capacity fueled by natural gas.

Calculated CAGR using first positive period since CAGR cannot be calculated with "0", "Negative", or "Imaginary Numbers."

GTM/SEIA's 2019 report states "Beyond seeing the highest number of total solar installations ever recorded, 2019 also brough a shakeup at the top of the residential solar rankings, reflecting the increased geographic diversity of residential solar adoption." 2019 saw a 15% increase of residential solar from 2018, with 2.8 GW<sub>DC</sub> installed. Residential growth is expected to range from 9-17% from 2020-2021 "due to both emerging markets with strong resource fundamentals like Florida and Texas and markets where recent policy developments have increased near-term forecasts."

With 2019 in the books, a few key themes have emerged about the state of the residential solar market.

Installation growth and market penetration levels suggest major states have moved past early adopters. Among the highest-penetration markets in the nation, residential growth rates were mixed in 2019. Northeast states had long been at the top of the residential solar rankings, but only one market (New Jersey) remained in the top five rankings. Rather, mature and emerging markets such as California, Arizona, and newcomers Florida and Texas rounded out the top five. The slowdown in Northeast markets has resulted in geographic diversification, with the states spread out across the U.S. Legacy markets are no longer the primary engines of growth. Though California is forecasted to be the largest market for the foreseeable future due to the sheer size of the state, the regional growth landscape began to shift and diversify in 2019. Of the top 10 markets in 2018, six markets experienced annual contraction in 2019, while three experienced single-digit percentage growth. Meanwhile, a handful of states are leapfrogging developed markets. Both Texas and Florida saw installations that surpassed legacy markets Maryland and Massachusetts last year, signaling new state-level leadership on residential solar development. In 2019, we saw a continued pivot away from legacy, incentive-driven markets and the emergence of low-penetration markets with limited third-party ownership options, strong PV resources, and low electricity rates – a trend we expect to continue.

Residential PV continues to be constrained by costs of customer acquisition. Outside of overhead and margin, customer-acquisition costs remain the highest expense for installers of all sizes, averaging 20% of the total system pricing. This reaffirms our view that at existing prices, sales and marketing are a vital part of continued residential market development. High customer-acquisition costs are directly related to high overall cost of installation, which also suggests a virtuous cycle of reduced costs. One target area for the industry to reduce costs is through streamlining the permitting and inspection processes, as permitting delays lead to customer attrition and other expenses. SEIA and the Solar Foundation, along with numerous companies, are working together to address these issues. New construction and roof replacement markets also represent an opportunity to address both customer-acquisition and permitting costs. However, at existing price levels, the high cost of customer acquisition will slow growth in the near term.

Incentives and net metering remain important market enablers but show diminishing rates of return. No substantial revisions were made to residential net energy metering ("NEM") values in 2019 other than in South Carolina, where the net metering cap was removed. In prior years, impending changes to NEM, other state-level incentives, or rate structures have created demand pull-in. The major Northeast markets collectively saw no growth in installation volumes as a result of net metering. Higher levels of solar penetration and steep customer-acquisition costs have played a role, as well. While strong NEM policy remains an essential foundation for rooftop solar adoption, future growth across legacy markets will require technology and business-model innovation to tap into new customer demographics.

Meanwhile, California's new home solar mandate may signal the next phase of solar market adoption. The California Energy Commission's decision in early 2018 to require solar PV on all new homes beginning in 2020 significantly insulates our long-term forecasts by adding an additional gigawatt of residential demand from 2020-2024E. While it remains to be seen whether other states will follow suit, some municipalities have created solar mandates for new buildings. Major national installers are spending considerable resources building relationships with housing developers to comply with California's mandate while also aiming to capitalize on one-off housing developments outside of state mandates. With several newly announced entrants into the space, new home solar, whether mandated or voluntary, could provide an opportunity to bridge the cost of customer acquisition gap that has constrained growth.

# ITC expiration

Since 2006, the Investment Tax Credit ("ITC") has helped annual solar installation grow by over 1,600 percent, a compound annual growth rate of 76 percent. The projected growth is expected to slow in 2020, as developers were closing financing transactions prior to the 2019 year-end decrease in ITC. Commercial and utility-scale projects which have commenced construction before December 31, 2021 may still qualify for the 30, 26 or 22 percent ITC if they are placed in service before December 31, 2023. The ITC has begun a gradual step-down arriving at 10% for projects placed in service after 2023 or that begin construction after 2021<sup>13</sup>.

The ITC has been amended and extended a number of times, most recently in February 2018. According to the Database of State Incentives for Renewables & Efficiency (DSIRE)<sup>14</sup>, the eligible solar energy property includes equipment that uses solar energy to generate electricity, to heat or cool (or provide hot water for use in) a structure, or to provide solar process heat. Hybrid solar lighting systems, which use solar energy to illuminate the inside of a structure using fiber-optic distributed sunlight, are eligible. Passive solar systems and solar pool-heating systems are not eligible. The table below shows the value of the investment tax credit for each technology by year.

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<sup>&</sup>lt;sup>13</sup> https://www.seia.org/initiatives/solar-investment-tax-credit-itc

<sup>&</sup>lt;sup>14</sup> "Incentives/Policies for Renewables and Efficiency," DSIRE, March 27, 2018.

The expiration dates are based on when construction begins.

TECHNOLOGY	12/31/16	12/31/17	12/31/18	12/31/19	12/31/20	12/31/21	12/31/22	FUTURE YEARS
PV, Solar Water Heating, Solar Space Heating/Cooling, Solar Process Heat	30%	30%	30%	30%	26%	22%	10%	10%
Hybrid Solar Lighting, Fuel Cells, Small Wind	30%	30%	30%	30%	26%	22%	22%	N/A
Geothermal Heat Pumps, Microtubines, Combine Heat and Power Systems	10%	10%	10%	10%	10%	10%	N/A	N/A
Geothermal Electric	10%	10%	10%	10%	10%	10%	10%	10%
Large Wind	30%	24%	18%	12%	N/A	N/A	N/A	N/A

Source: Energy. Gov, Business Energy Investment Tax Credit (ITC) 2018

## **ITC Safe Harbor**

As provided above, the 2018 ITC tax legislation sunsets ITC, with annually decreasing percentages until it reaches 10% in 2022 (place in service before 2024). Currently, panel and inverters purchases have increased significantly in 2019. This surge in the industry is understood to meet the start of the construction (5%) threshold in time to preserve the 30% ITC for projects that will not come on-line for the next couple of years.

IRS Notice 2020-41 extended the Continuity Safe Harbor. The notice provides that, any qualified facility that began construction in either calendar year 2016 or 2017, the Continuity Safe Harbor is satisfied if the facility is placed into service by the end of a calendar year that is no more than five calendar years after the calendar year during which construction began. Further, according to IRS Notice 2020-41, the Five Percent Harbor treats construction as beginning when five percent of total project cost is incurred. As noted in the narrative, IRS Notice 2020-41 has extended ITC through October 15, 2020 as a result of the coronavirus pandemic.

# **Bonus Depreciation**

In response to the economic downturn of 2008, Congress took action to further incentivize capital investment by accelerating the depreciation schedule economy wide. The Tax Relief, Unemployment Insurance Reauthorization, and Job Creation Act of 2010 allowed companies to claim a 100% depreciation bonus on qualifying capital equipment purchased and placed in service by December 31, 2011. Congress included an extension of 50% bonus depreciation in early 2013 in the so-called "fiscal cliff" deal, which was scheduled to expire at the end of 2013. Under 50% bonus depreciation, in the first year of service, companies could elect to depreciate 50% of the basis while the remaining 50% is depreciated under the normal MACRS recovery period. At the

end of 2014, Congress passed a retroactive extension of 50% depreciation such that companies that placed qualifying equipment in service through December 31, 2014 were eligible for 50% bonus depreciation. In December 2015, Congress passed the Protecting Americans from Tax Hikes Act of 2015, which included a 5-year extension of bonus depreciation, including a phase-out that is structured as follows: 2015-2017: 50% bonus depreciation; 2018: 40%; 2019: 30%, 2020 and beyond: 0%<sup>15</sup>. The Tax Cut Act expands and extends the additional ("bonus") first year depreciation provision under Code Section 168(k) for "Qualified Property," defined as depreciable assets with a recovery period of 20 years or less, acquired within a specific applicable time period (as outlined below), and a specific placed in-service date (as outlined below).

- Qualified Property acquired *before* September 28, 2017 and placed in service *after* September 27, 2017: 50% bonus depreciation is available for the taxpayer.
- Qualified Property acquired *after* September 27, 2017 and placed in service *before* December 31, 2017: 100% bonus depreciation is available to the taxpayer. Under this scenario, the taxpayer may elect a 50% first year bonus depreciation rather than the full 100% allowance.
- Qualified Property acquired *after* September 27, 2017 and placed in service *before* January 1, 2023: 100% bonus depreciation is available to the taxpayer.

Additionally, the 100% expensing of equipment expires at year end 2022, and phases down annually at a rate of 20% through 2026.

BONUS DEPRECIATION									
9/28/17-12/31/17	100% OR 50% Election								
1/1/18 – 12/31/22	100%								
1/1/23-12/31/23	80%								
1/1/24-12/31/24	60%								
1/1/25-12/31/25	40%								
1/1/26-12/31/26	20%								

# **U.S. Solar Market Outlook Trends**

According to the GTM/SEIA's *U.S. Solar Market Insight, September 2020* report, though the first few years of community solar (CS) growth were defined by Minnesota's pipeline, 2019 marked an inflection point: New states have entered the market and are providing a greater share of CS growth. In 2019, Minnesota accounted for 31% of CS capacity, while New York accounted for nearly 40% of capacity. Continuing to establish its dominance in community solar, New York interconnected 78 MW<sub>DC</sub> in Q2 2020, accounting for nearly two-thirds of the national total that quarter. The state even surpassed Massachusetts as the second-largest state market in community solar projects.

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<sup>&</sup>lt;sup>15</sup> "Issues & Policies," Solar Energy Industries Association

New York, Massachusetts, Maryland, Illinois, and New Jersey will see additional growth this year. Starting in 2021-2022, New Jersey's permanent CS program will begin and partially offset some of the declines from upcoming CS program expirations. Maine has also passed a new CS procurement program, providing upside in the long-term forecast, with initial channel checks indicating significant interconnection volumes scheduled for 2020.

Amid the slew of policy reforms across major state markets, the expansion of community solar will support additional growth this year. New Jersey's permanent CS program will offset some declines from upcoming CS program expirations and delay, although the forecast for the program has been adjusted downward to reflect reductions in project incentives.

Maine and Virginia are expected to positively impact the CS market as a result of the passage and implementation of 100% clean energy legislation. Hundreds of megawatts' worth of CS are expected to come online in Maine over the next few years through a distributed generation procurement solicitation and an uncapped Net Energy Billing program providing a community shared-solar option for residential and commercial subscribers. Implementation for Virginia's CS program is unlikely prior to 2023. The below table is the national community solar forecast through 2025.



Source: GTM/SEIA Q3 2020 U.S. Solar Market Insight Report

Beyond 2020, growth in the US solar industry will resume as concerns from the coronavirus pandemic subside. "Overall demand continues to grow as utilities announce more solar procurement targets in their integrated resource plans, backing aggressive state renewables targets." Forecasts for 2020 and 2021 have been revised down as projects are delayed until 2022 and 2023. 2024 forecasts are strong, as projects will be pulled into 2023 delivery to capitalize on greater ITC benefits.

# **APPENDIX II**

# GENERAL ECONOMIC OUTLOOK

In the appraisal of a company or investments asset, the state of the general economy and business prospects for the future are important considerations. The value of the asset is indirectly related to the state of the general economy by virtue of factors such as inflation, interest rates, and consumer confidence levels. In 2020, the Coronavirus has triggered numerous actions by the Federal Government to combat the health and economic crises. Below are the most recent developments:

The United States Federal Funds Rate has remained steady since it was lowered from 1.75% to 1.25% in March. This lowered rate represented the largest emergency rate cut since the 2008 global financial crisis, in an attempt to counteract the outbreak's effect on the American economy.

As of September 1, 2020, approximately \$1 billion of the \$8.3 billion provided by the Coronavirus Preparedness and Response Supplemental Appropriations Act has been used 16. This Act signed was signed into law on March 6, 2020, by President Trump to fight the pandemic. The deal includes more than \$3 billion for the research and development of vaccines, therapeutics and diagnostics, as well as \$2.2 billion for the CDC, and \$950 million to support state and local health agencies. Another bill, the Families First Coronavirus Response Act was approved on March 18. The bill provides funding for medical care and research, food and nutritional programs, unemployment benefits, and allowing the IRS to implement new tax credits for individuals and businesses. As of September 1, 2020, approximately \$9 billion of the bill's \$17 billion funds have been utilized.

On September 4, 2020 the U.S. Department of Health and Human Services and the U.S. Department of Housing and Urban Development would be temporarily suspending all evictions until the end of December. This order was an extension of an order passed earlier this year and no longer covers foreclosures 17.

In an effort to expedite a vaccine for COVID-19, the US Government introduced Operation Warp Speed in March, a partnership among components of the Department of Health and Human Services ("HHS") and various federal agencies and private firms. HHS has committed billions of dollars to fund the development, manufacture, and distribution of vaccines, with the latest updates occurring in October and November. On October 13, HHS announced a \$31 million agreement with Cytiva, helping to expand the company's manufacturing capacity for products key for producing COVID-19 vaccines. On November 10, plans were announced to distribute doses of Eli Lilly and Company's antibody therapeutic, Bamlanivimab, to non-hospitalized patients with mild to moderate cases of COVID-19. On November 12, HHS announced partnerships with large and regional chain

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<sup>&</sup>lt;sup>16</sup> https://datalab.usaspending.gov/federal-covid-funding/

 $<sup>^{17}\</sup> https://www.federalregister.gov/documents/2020/09/04/2020-19654/temporary-halt-in-residential-evictions-to-prevent-the-further-spread-of-covid-19$ 

pharmacies to increase access to the vaccine once available. These chains cover roughly 60 percent of pharmacies across the United States<sup>18</sup>.

The Election has resulted in a Biden-Harris victory. It is understood that a Biden Administration will have a favorable impact for the renewables industry. Lastly, it is expected that an additional stimulus package will not be passed until after the lame-duck Congressional session. The terms of the stimulus package will most likely be determined by the Georgia U.S. Senate runoff election. If the Democrats pick up both seats, they will control the Legislative and Executive Branches. If the Democrats pick up a single seat the Republicans will maintain their majority in the Senate.

The fiscal cost of the preceding (not counting the potential fourth stimulus package) is more than \$6 trillion and is effectively considered a bridge loan to the goal of mitigating further economic damage. The \$6 trillion dollar amount is about 30% of annual GDP. Its effect on the economy, deflation/inflation, borrowing costs, and the value on the dollar is unknown.

Thus, an estimated time frame to returning to a pre-covid environment is unknown. By September, the U.S. stock market indexes rebounded sharply to new highs that were reached just prior to the pandemic occurring. Given the ongoing stimulus response being debated, the economic outlook remains guarded. The known is that a stimulus and monetary support will have to be financed and paid for. The future could be indicative of possibly having a deflationary period and then rising interest rates, increased income taxes and adverse changes to the value of the U.S. dollar.

Conclusion – While there have been significant changes to the market and the economy in 2020, relatively minor impacts to the renewable energy industry and its market participants have been borne out. As such, it is concluded that the economic influence on subject renewable energy industry is correlated.

The following is the Economic Outlook for 3Q2020 based on the most recently published economic data for the U.S markets and economy.

## Q3 2020 Overview & Outlook

On Friday, November 6, the Bureau of Labor Statistics released figures for employment in October. Total nonfarm payroll employment rose by 638,000 and the unemployment rate declined to 6.9 5. Such improvements are reflective of the resumption of economic activity that had been curtailed due to COVID-19 and efforts to contain it. Jobs in leisure and hospitality, professional and business services, retail trade, and construction increased while government employment declined.<sup>19</sup>

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<sup>&</sup>lt;sup>18</sup> Fact Sheet: Explaining Operation Warp Speed. The Department of Health and Human Services. November 13, 2020. https://www.hhs.gov/coronavirus/explaining-operation-warp-speed/index.html

<sup>&</sup>lt;sup>19</sup> "The Employment Situation – October 2020." Bureau of Labor Statistics. November 6, 2020.

On Thursday, October 29, the Bureau of Economic Analysis (BEA) released figures for GDP in the third quarter. Note the data released is preliminary and subject to revision by the BEA. GDP increased at an annual rate of 33.1 5 in the third quarter, following a decrease of 31.4 5 in second quarter. The increase was driven by the reopening of businesses following lockdowns triggered by COVID-19.

Current-dollar personal income decreased \$540.6 billion in the third quarter, versus an increase of \$1.45 trillion in second quarter. The decrease in personal income was more than accounted for by a decrease in personal current transfer receipts (notably, government social benefits related to pandemic relief programs) that was partly offset by increases in compensation and proprietors' income.

Disposable personal income decreased \$636.7 billion, or 13.2 5, in the third quarter, in contrast to an increase of \$1.60 trillion, or 44.3 5, in the second quarter. Real disposable personal income decreased 16.3 5 in the third quarter, in contrast to an increase of 46.6 5 in the second quarter.

Personal saving was \$2.78 trillion in the third quarter, compared with \$4.71 trillion in the second quarter. The personal saving rate—personal saving as a 5age of disposable personal income—was 15.8%5 in the third quarter, compared with 25.7%5 in second quarter.<sup>20</sup>

Consensus Economics Inc., publisher of Consensus Forecasts—USA, reports that the consensus of U.S. forecasters believe that real GDP will grow at a seasonally adjusted annual rate of 24.9% in the third quarter of 2020 and increase by 5.5% in the fourth quarter of 2020. Every month, Consensus Economics surveys a panel of 30 prominent U.S. economic and financial forecasters for their predictions on a range of variables, including future growth, inflation, current account and budget balances, and interest rates. The forecasters expect GDP to contract 4.4% in 2020 but increase 3.8% in 2021.

They forecast that consumer spending will increase at a rate of 31.7% in the third quarter of 2020 and rise 5.3% in the fourth quarter of 2020. They expect consumer spending to contract 4.8% in 2020 but increase by 4.3% in 2021.

The forecasters believe unemployment will average 9.6% in the third quarter of 2020 and 8.3% in the fourth quarter of 2020. They predict that unemployment will average 8.7% in 2020 and 7.0% in 2021.

The forecasters believe that the three-month Treasury bill rate will be 0.2% at the end of the third quarter of 2020 and 0.2% at the end of the fourth quarter of 2020. They predict the 10-year Treasury bond yield will be 0.7% at the end of the third quarter of 2020 and 0.8% at the end of the fourth quarter of 2020.

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<sup>&</sup>lt;sup>20</sup> "Gross Domestic Product, Third Quarter 2020 (Advance Estimate)." Bureau of Economic Analysis. October 29, 2020.

They also believe consumer prices will rise at a rate of 4.0% in the third quarter of 2020 and rise 1.7% in the fourth quarter of 2020. They expect consumer prices to increase 1.1% in 2020 and 1.9% in 2021. They expect producer prices to increase 5.7% in the third quarter of 2020 and 2.1% in the fourth quarter of 2020. The forecasters anticipate producer prices will fall 1.3% in 2020 but rise 1.9% in 2021.

The forecasters believe real disposable personal income will fall 14.6% in the third quarter of 2020 and fall 3.2% in the fourth quarter of 2020. They believe real disposable personal income will increase 5.8% in 2020 but fall 2.0% in 2021.

The forecasters expect industrial production to increase 30.6% in the third quarter of 2020 and increase 8.4% in the fourth quarter of 2020. They forecast that industrial production will decrease 8.1% in 2020 but rise 4.5% in 2021.

Nominal pretax corporate profits are expected to decrease 14.2% in 2020 but rise by 6.1% in 2021. The forecasters also project housing starts will be 1,320,000 in 2020 and 1,360,000 in 2021.

The most recent release of The Livingston Survey (the "Survey") predicts lower growth for the first half of 2020 but expects the second half of 2020 to be higher than had been predicted in its prior survey. The Survey, conducted by the Federal Reserve Bank of Philadelphia, is the oldest continuous survey of economists' expectations. It summarizes the forecasts of economists from industry, government, banking, and academia. The participants project real GDP to shrink at an annual rate of 20.2% in the first half of 2020 and grow by 9.6% in the second half of 2020. They believe that GDP will grow 2.20% annually over the next 10 years.

The Survey forecasted the unemployment rate to be 17.4% in June 2020 and to fall to 10.6% by December 2020. The unemployment rate is expected to average 11.9% in 2020 and fall to 8.3% in 2021.

The forecasters in the Survey expected consumer price inflation (CPI) to be -1.5% in June 2020 and 2.0% by December 2020. The Survey expects CPI to have a mean of 2.11% over the next 10 years. The Survey also expects producer price inflation (PPI) to be -8.5% in June 2020 and 4.2% in December 2020.

The Survey predicted the interest rate on three-month Treasury bills will be 0.13% in June 2020 and 0.14% in December 2020. It predicted the interest rate on 10-year Treasury bonds to reach 0.70% in June 2020 and 0.81% in December 2020. The forecasters have revised their previous projections for future S&P 500 index values. They expect the S&P 500 index to be 3,050.0 at the end of June 2020 and 3,117.5 by December 2020.



The Federal Reserve published its summary of economic projections, which is released with the FOMC meeting minutes. For 2020, the Federal Reserve forecasts GDP to contract by 3.7%, which is better than its prior forecast for a decline of 6.5%. GDP is forecasted to grow by 4.0% in 2021 and by 3.0% in 2022. The unemployment rate is now projected at 7.6% for 2020, lower than the previously forecasted rate from December, at 9.3%. Unemployment is expected to be at 5.5% in 2021 and 4.6% in 2022. The Federal Reserve forecasts PCE to be at 1.2% in 2020 and rise to 1.7% in 2021 and 1.8% in 2022. Core PCE is forecasted to be 1.5% in 2020 before rising by 1.7% in 2021 and 1.8% in 2022.

The Energy Information Administration (EIA) predicts that the West Texas Intermediate crude oil spot price will average approximately \$38.76 per barrel in 2020 and \$44.72 per barrel in 2021, compared with \$56.99 per barrel in 2019. The EIA expects retail prices for regular-grade gas to average \$2.15 per gallon in 2020 and \$2.23 per gallon in 2021, compared with \$2.60 per gallon in 2019.

The EIA believes the Henry Hub natural gas spot price will average \$2.07 per million Btu (MMBtu) in 2020 and \$3.13 per MMBtu in 2021, compared with \$2.57 per MMBtu in 2019. The cost of coal delivered to electricity-generating plants, which averaged \$2.02 per MMBtu in 2019, is expected to average \$1.96 per MMBtu in 2020 and \$2.04 per MMBtu in 2021. Residential electricity prices, which averaged 13.04 cents per kilowatt-hour (kWh) in 2019, are expected to average 13.06 cents per kWh in 2020 then rise to 13.09 cents per kWh in 2021. The airline ticket price index, which averaged 265.56 in 2019, is expected to be 208.96 in 2020 and 183.33 in 2021.

The National Association of Realtors' Realtors Confidence Index survey reported that its Buyer Traffic Index fell 1.0 point, to 75.0, reaching a level indicating very strong conditions. The Seller Traffic Index fell 1.0 point, to 44.0, in September. The RCI is a key indicator of housing market strength based on a monthly survey of over 50,000 real estate practitioners. Practitioners are asked about their expectations for home sales, prices, and market conditions.

NAR, in its U.S. economic outlook, projects existing-home sales in 2020 to be 5.400 million (+1.1%) and that they will rise to 5.860 million (+8.5%) in 2021. It believes that new single-family home sales will be 800,000 (+17.1%) in 2020, before increasing to 950,000 (+18.8%) in 2021. NAR believes the median existing-home price will be \$284,800 (+4.7%) in 2020, before increasing to \$296,500 (+4.1%) in 2021. NAR believes the median new-home price will be \$328,300 (+2.1%) in 2020, before rising to \$338,100 (+3.0%) in 2021. It expects housing starts to increase to 1,350,000 (+4.7%) in 2020, then to 1,430,000 (+5.9%) in 2021. NAR believes the 30-year fixed mortgage rate will average 3.2% in 2020 and remain at 3.2% in 2021, and the 5-1 hybrid adjustable rate mortgage will average 3.1% in 2020 and 2.9% in 2021.

In addition, the following chart was abstracted from the subject Economic Outlook Update, and provides historical economic data for the last twelve years, as well as forecasts for the next two years of the US economy:

EXHIBIT 2B: Historical Energy Data 2007-2019 and Forecasts 2020-2021

														EIA Fo	recasts	% Cha	nge
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2020	2021
Brent crude oil spot price*	72.49	96.94	61.75	79.64	111.33	111.65	108.56	98.89	52.32	43.74	54.15	71.21	64.34	41.19	47.07	-36.0%	14.3%
West Texas intermediate crude oil price*	72.34	99.67	61.96	79.50	94.90	94.08	97.98	93.17	48.67	43.33	50.79	65.07	56.99	38.76	44.72	-32.0%	15.4%
Heating oil retail price**	266.40	350.90	252.40	297.10	365.70	378.60	378.28	371.35	264.92	210.28	250.69	301.15	299.91	244.46	246.49	-18.5%	0.8%
Gasoline regular grade retail price**	280.60	325.70	234.90	278.10	352.60	362.70	350.55	336.38	242.83	214.92	241.69	272.66	260.37	215.06	223.15	-17.4%	3.8%
Electricity residential retail price***	10.65	11.26	11.51	11.54	11.72	11.88	12.13	12.52	12.65	12.55	12.89	12.87	13.04	13.09	13.22	0.4%	1.0%
Electricity commerical retail price***	9.65	10.26	10.16	10.19	10.23	10.09	10.26	10.74	10.64	10.37	10.66	10.67	10.66	10.56	10.71	-0.9%	1.4%
Electricity industrial retail price***	6.39	6.96	6.83	6.77	6.82	6.67	6.89	7.10	6.91	6.76	6.88	6.92	6.83	6.71	6.78	-1.8%	1.0%
Natural gas Henry Hub spot price****	6.98	8.86	3.95	4.39	4.00	2.75	3.73	4.39	2.63	2.51	2.99	3.15	2.57	2.07	3.13	-19.3%	50.9%
Airline Ticket Price Index	251.70	282.00	258.00	278.20	304.00	305.00	312.70	307.70	292.23	282.56	275.78	264.91	265.40	208.86	183.33	-21.3%	-12.2%
Producer Price Index: Petroleum	2.14	2.72	1.76	2.25	2.99	3.07	2.95	2.78	1.76	1.44	1.74	2.14	1.94	1.44	1.54	-25.9%	6.9%
Producer Price Index: all commodities	1.73	1.90	1.73	1.85	2.01	2.02	2.03	2.05	1.90	1.85	1.94	2.02	2.00	1.94	2.02	-2.9%	4.3%
Source of historical and forecast data: U.S. Energy Informati	tion Administra	tion.															

The Bureau of Economic Analysis (BEA) reported that the nation's economy—as indicated by GDP—grew by its largest rate in history, increasing at an annual rate of 33.1% in the third quarter of 2020. The third-quarter rise ended the downward spiral to the U.S. economy caused by the coronavirus pandemic, which initially slowed the U.S. economy by 5.0% in the first quarter and by 31.4% in the second quarter.

The 33.1% rise in the third quarter was due to sharp increases in personal consumption expenditures (PCE), private inventory investment, exports, nonresidential fixed investment, and residential fixed investment that were partly offset by decreases in federal government spending (reflecting fewer fees paid to administer the Paycheck Protection Program loans) and state and local government spending. Imports, which are a subtraction in the calculation of GDP, increased 91.1% in the third quarter, after declining 54.1% in the second quarter of 2020.

Final sales of domestic product increased at a rate of 25.5% in the third quarter, a reversal from the decline of 28.1% in the second quarter. Final sales of domestic product are GDP minus the influence of private inventory investment, which tends to be volatile from quarter to quarter. In 2019, final sales of domestic product rose at a rate of 2.2%. Final sales to domestic purchasers, or GDP excluding trade and inventories, increased at a rate of 29.2% in the third quarter, after a decline of 27.1% in the prior quarter.

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<sup>\*</sup>Dollars per barrel

<sup>\*\*</sup>Cents per gallon, U.S. average \*\*\*Cents per kilowatthour, U.S. average \*\*\*\*Dollars per million Btu