



Sun Communities, Inc.

**2022 ISO 14064 Greenhouse Gas Emissions Audit**

**Verification Report Issued March 16, 2023**

**Introduction**

Sun Communities, Inc. GHG Inventory history, original reporting was to a Limited Corporate GHG Protocol Operational Control Audit.

***Sun Communities, Inc has selected ISO 14064-1 with ISO 14064-2 for Validation and Verification (Attestation Audit) to ISO 14064 – 3:2019. The 2022 ISO 14064-1 and ISO 14064-2 Audit Assurance Level is Reasonable Assurance in the Audit Boundary.*** The combination of ISO 14064 with the Financial Control Audit Boundary will allow Sun Communities, Inc. to set the following:

- a. Baseline year
- b. Carbon Neutrality Target
- c. Propose a Net Zero Emissions Target

Sun Communities, Inc. will also use the Validation and Verification Audits and subsequent reports to report to TCFD and several other frameworks (see Sun Communities, Inc. Reporting Section of this report on Page 8) for the full list of reporting frameworks.

Sun Communities, Inc. has selected ISO 14064 with the Audit Boundary of Financial Control. Sun Communities, Inc. has been able to identify and/or develop:

- 1) Internal programs to fill found Data Gaps
- 2) Actionable data for both internal and external operations to measure and develop reduction plans for implementation in 2023 and beyond to Sun Communities, Inc. baseline year of 2025 for a fully measured ISO 14064 GHG Emissions Audit.
- 3) Supplier Partnerships and Programs to Measure, Validate, and Verify Supplier GHG Emission Reporting.
- 4) Internal communication with Employees and Communities across the portfolio to implement programs to reduce; GHG Emissions, improve environmental health, and life in their communities.

## **ISO 14064 Audit Participants and Rolls**

Sun Communities, Inc. - Project Originator, Internal Data Validation, and Internal Audit Review of Data, Calculations, Factors, and Results.

Melissa Smith, Director, Sustainability

Net Zero Analysis & Design Corp. – External 3<sup>rd</sup> party Validation of : All Data, Calculation, GHG Factor Validation, Project Validation, Validation Audit and Reporting. Net Zero Analysis & Design Corp. has no conflict of interest with Sun Communities, Inc. or with Talon/LPE Verification Auditor for Sun Communities, Inc.

George D. Sullivan, CEO, ISO 14001 Environmental Management Lead Auditor Certification Number C283047, Issued on 02/13/2018 by SAI GLOBAL

Mike Fiorino, EVP Compliance, ISO 14001 Environmental Management Lead Auditor Certification Number C283044, Issued on 02/13/2018 by SAI GLOBAL

Talon/LPE – External 3<sup>rd</sup> Party - Verification (Attestation) Auditor covering: Data, Factor, and Calculation Verification Review and Verification of GHG Emission, issuing the 2022 Greenhouse Gas Verification Report Generation and Issuance. Talon/LPE has on conflict of interest with Sun Communities, Inc. or with Net Zero Analysis & Design Corp. Validation Auditor for Sun Communities, Inc.

Steven Fleming, P.G., Director of Compliance and Sustainability, ISO 14001 Environmental Management Lead Auditor Certification Number 3555477-238738 issued on 06/04/2022 by British Standards Institution

## **Sun Communities, Inc. 2022 Audit Boundary - Inclusions**

Financial Control has been selected for the GHG Audit Year of 2022 ISO 14064 Audit Boundary. The GHG Design and Implementation of ISO14064–2 Audit which includes the following existing Sun Communities, Inc. locations in the United States (US), Canada, and the United Kingdom (UK) comprised of:

- 1) Corporate Offices
- 2) Office Equipment, Furniture, Electronics, IT
- 3) Manufactured Homes Communities (MH)
- 4) Recreational Vehicle's Communities (RV)
- 5) Safe Harbor Communities (Marina)
- 6) Physical Risk Modeling

## **Sun Communities, Inc. 2022 Audit Boundary Data Review**

### **Properties Coverage**

2022 inventory includes data from manufactured housing (MH), recreational vehicle (RV) and Marina segments across the US, Canada, and the UK. Properties owned for less than 3 months of the calendar year were excluded from reporting.

Data for properties disposed of in 2022 have been removed from historic reports for consistent reporting. This will result in a change in previously reported data.

### **Gap data accounting, Inc.**

11+1 accounting practices have been applied to fill the data gaps related to delays in utility bill receipt.

### **Electric, Natural Gas and Water**

In differentiating between operational and downstream utility usage (electric, natural gas, electric, and water), decisions were based on who is responsible for the direct payment to the utility provider. Utilities paid for by Sun are considered operational regardless of rebill. Utilities where the resident maintains the direct relationship to the utility provider are considered downstream leased asset.

As a result, all utility usage at RV, Marina and UK MH properties is included in operational. At MH communities, operational usage is for amenity buildings and exterior usage. The data source for this information is the bills received from the utility providers.

In the US, 94% of residents within MH properties maintain direct relationships with the utilities. Their usage is categorized as downstream leases assets. Currently, we estimate the GHG emissions of their electric usage using a national average household rate <sup>1</sup>. Options for collection of aggregate utility data for these communities is being evaluated, as well as options for water usage estimations.

### **Propane**

All propane usage is considered operational, regardless of its use for heating amenities or resale to guests. Annual purchased data is collected from our vendors.

### **Waste**

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<sup>1</sup> [Center for Sustainable Systems, University of Michigan. 2022. "Carbon Footprint Factsheet." Pub. No. CSS09-05.](#)

Marina properties are implementing a waste management process in 2023. That data will be used in future reporting as it becomes available.

54% of MH and RV properties receive curbside waste pickup. As a result, waste weights or diversion rates were not received. The impact of waste at these locations was estimated using available national and local averages.

The contract waste management companies provide tonnage and diversion rates for the properties serviced.

### **Upstream and Downstream Indirect Data Sources**

Emissions for transportation were estimated based on vehicle and flight mileage reports, as well as hotel nights.

Employee commuting is estimated using team member schedules and average distance from property.

The Quantis spends based tool was utilized to calculate purchased goods and services emissions. Supplier provided data is being evaluated for future reporting.

Estimations were used to calculate the emissions from franchise locations. Peer properties were utilized to establish appropriate average usage rates. Processes are in development with franchise locations to collect direct data by 2025.

### **Physical Risk Modeling**

Sun Communities, Inc. commissioned Physical Risk Modeling through a 3<sup>rd</sup> Party Vendor, analyzing the Climate Change Physical Risk for each location.

Sun Communities, Inc. geographic footprint presents a physical risk modeling result of; wildfire, temperature change, water scarcity, sea level rise, flooding, storm surge, and windstorm risk across our portfolio.

- A current modeled assessment identifies the highest potential risks to Sun Communities, Inc. portfolio as:

1. Access to water
2. Flooding
3. Wildfires

- The impact from chronic and acute physical risks may be felt in disruption and/or rising cost of utility services.
- Potential air and water quality issues may arise during and after physical emergencies.
- In response to the impacts of physical risks, customer demand may change and/or evolve from one geographical area to another.
- Appropriate mitigation and preparedness may increase the demand for properties less exposed to frequent physical risks.
- Areas viewed as having limited low physical risks may see an increased demand for goods and services, therefore commanding a higher cost for such services.
- The broad geographic footprint of Sun Communities Inc. creates an opportunity to assess and underwrite risks across areas with various climate risk challenges and allows us to invest and allocate human and financial capital in the most optimal locations.

**Sun Communities, Inc. GHG Coefficients used for 2022 data conversions to GHG Emissions:** Data calculations were converted to; CO<sub>2</sub>, CH<sub>4</sub>, and N<sub>2</sub>O are which are summed to equal CO<sub>2</sub>e in Metric Tons for reporting.

- US EPA 2022 CO<sub>2</sub>e GHG Factors Database
- US EPA Scope 3/ISO 14064 Categories Factors
- US EPA WaterSense Program
- US EPA 2022 National E-Grid Database
- UK Government GHG Conversion Factors for Company Reporting 2022
- ICAO
- Quantis
- ICPP Calculations from Good Practices Guidance and Uncertainty Management in National Greenhouse Gas Inventories
- Solar Panel Manufacturers ISO 14064, and ISO 14001 Environmental Management Report for the Solar Panels produced by the company.

#### **Sun Communities, Inc. 2022 Audit Boundary – Exclusions**

Not included in the Sun Community, Inc. 2022 Audit Boundary are the following:

- 1) Fugitive Emissions
- 2) Land Use and Use Change
- 3) Capital Goods
- 4) Development Activities
- 5) Investments

Currently there is no available data or existing interior or exterior matrix to accurately capture the data to allow for a proper audit. Sun Communities, Inc. in conjunction with Net Zero Analysis & Design Corp.,

Sun Communities, Inc. Validation Company is in the process of developing and reviewing ISO Standards and county regulations to begin data collection in 2023, for the Sun Communities, Inc. FY 2023 GHG ISO 14064-2 Audit and Reporting.

### **Sun Communities, Inc. 2022 GHG Emission Inventory Results**

In the Unit of Measure used in the Table 1.1 on page 6 of this report is tonne CO2 is equivalent to Metric Ton of CO2e. It also displays Comparisons Reporting of GHG Measurements by reporting year 2022, 2021, 2020, and 2019.

<b>Metric</b>	<b>Unit of Measure</b>	<b>2022</b>	<b>2021</b>	<b>2020</b>	<b>2019</b>
GHG Emissions	tonne CO2	5,144,672	206,910	103,598	93,107
GHG Emissions Intensity	tonne CO2/ sq ft	0.0294	0.0148	0.0073	0.0069
GHG Emissions from energy Intensity	tonne CO2/ sq ft	0.0033	0.0033	0.0063	0.0060
GHG Emissions from energy Intensity	tonne CO2/ \$1mil rev	110.70	118.07		
<b>ISO 14064</b>	<b>Unit of Measure</b>				
Category 1	tonne CO2	62,152	21,151		
Category 2	tonne CO2	148,391	130,680		
Category 3	tonne CO2	20,986	1,349		
Category 4	tonne CO2	42,869	18,685		
Category 5	tonne CO2	4,870,274	35,045		
<b>GHG Protocol</b>	<b>Unit of Measure</b>				
Scope 1	tonne CO2	38,544	18,230	11,257	12,059
Scope 2	tonne CO2	148,391	130,680	77,708	68,821
Scope 3	tonne CO2	4,957,736	58,001	14,633	12,227
<b>Electric</b>					
Total Operational Electric Used	MWH	450,825	387,204	196,495	173,334
Electric Usage Intensity	mwh/per sq ft	0.008	0.009	0.014	0.013
On-site Solar Generation	MWH	8,030	1,235	0	0
% Purchased Electric	MWH	98%	87.2%	100%	100%
% Generated by on-site renewable	MWH	2%	0.32%	0%	0%
Property Coverage		100%	98%	97%	95%
<b>Waste</b>					
Total Waste	tonne	108,640	40,314		
Managed Waste	tonne	46%	100%		
Curbside Pickup	tonne	54%	-		
Diverted via recycling	tonne	14,172	4,031		
Diverted via composting	tonne	3,906	-		
Diverted via energy recovery	tonne	6,822	-		
Percent Diverted		23%	10%		
Property Coverage		81%	45%		
<b>Water</b>					
Total Water Consumption	m3	19,364,332	19,596,031	14,888,903	14,231,616
Water Intensity	m3/sq ft	0.34	0.43	1.05	1.05
Purchased Water	m3	85%	79%	84%	84%
Water Treatment	m3	15%	13%	16%	16%
Property Coverage		81%	85%	74%	74%
Properties included		653	600	373	351
Landlord Utility Managed	sq ft	56,343,842	45,294,621	14,114,409	13,574,369
Tenant controlled	sq ft	8,989,479	14,008,808		
Tenant Owned	sq ft	109,395,029			

Table 1.1

**Data Review and Reporting in Detail**

Talon LPE as the Verification 3<sup>rd</sup> Party for the Sun Communities, Inc. 2022 Greenhouse Gas Inventory and Reporting overall and in its entirety represents that the Reporting Represented in Table 1.1 above is correct and true, meeting or exceeding the definitions of “**Reasonable Assurance.**” Talon LPE conducts its own Independent 3<sup>rd</sup> Party Audit of all validation and client: data, factors, calculations, results, and reporting requirements, ensuring consistent detailed review of the Net Zero Analysis Client facing working group, and the Sun Communities, Inc. internal working group in our External 3<sup>rd</sup> Party Audit.

**Sun Communities, Inc. 2022 GHG Emission Inventory Depreciation Reduction Plan**

Sun Communities, Inc. uses a Standard Depreciation Schedule Depending on the Asset Class. Once the GHG Inventory is completed for a Base Line Year Measurement, Sun Communities, Inc. will announce the GHG Emission Standard Depreciation Schedule for all Asset Classes that will include reducing the GHG Emissions with the purchase of SEC Regulated Carbon Offsets or Generation, Investment, or Purchase of United Nations Framework Convention on Climate Change Clean Development Methodology Carbon Offset Projects as part of Sun’s Greenhouse Gas Reduction Plan.

**Sun Communities, Inc 2022 Renewable Energy Claims**

Sun Communities, Inc. has installed on-site solar as a “Behind the Utility Meter Project”. This “Behind the Utility Meter Project” tracks the solar production of each installation but does not generate utility Renewable Energy Certificates (REC’s). The solar production is recognized in the calculation of the Manufacture Housing (MH) Corporate GHG Emissions Scope 2, and ISO 14064 Category 2. Solar Electric GHG Emissions factors in grams/kwh were calculations based on the Solar Production based on all the Annual Total Solar Electrical Meters in the development.

Solar Electric GHG Emissions Factors are based on the Manufactures ISO 14064, and ISO 14001 Environmental Management Report for all the product lines the Solar Panel Manufacture Produces.

**Sun Communities, Inc. 2022 GHG Emissions Reporting**

The Sun Communities, Inc. Financial Control Audit Boundary using ISO 14064 for their 2022 GHG Emissions Inventory is a comprehensive approach, which will allow Sun Communities, Inc. to continue to add data points for their operations through enhanced or new tracking systems, supply chain and vendor requirements, increase transparency and assist franchise, as well as small and medium vendors to meet their reporting requirements. This process will develop an accurate GHG Emissions Picture of Sun Communities, Inc. Operations, Investments, Communities, and Developments.

It also provides Sun Communities, Inc. with the ability to adapt quickly to new and proposed regulation changes, as the changing regulatory environment continues to evolve on GHG Emissions Reporting.

**Using the 2022 GHG Emissions ISO 14064-2:2019 and ISO14064-3:2019 Audit of Financial Control Audit Boundary, Validation, and Verification**

GHG Reduction Plan Development – The current audit allows Sun Communities, Inc. to develop a GHG Reduction Plan to cover their current Assets and plan for future development and acquisition. As for divestitures of assets that have the following: 1) ISO 14064 Audit with Verification and Validation Reporting, 2) GHG Emission Reduction in place, with additional planned reductions proposed, 3) will reflect not only on the Value of Sun Communities, Inc. but on the assets, it is divesting as it continues to grow.

Sun Communities, Inc. Reporting Frameworks are:

- 1) Task Force on Climate-Related Financial Disclosure (TCFD)
- 2) Sustainability Accounting Standards Board (SASB)
- 3) Global Reporting Initiative (GRI)
- 4) Corporate GHG Protocol (GHG Protocol) – ISO 14064 Categories are combined to represent the GHG Protocol Reporting Alignment of Scopes 1 through 3.

Non-Framework Reporting:

Global Real Estate Sustainability Benchmark (GRESB) is Real Estate Reporting using some of the ISO 14064 Financial Control Audit Boundary Data, Calculations, and Results.

Carbon Disclosure Project (CDP)

S&P Corporate Sustainability Assessment

**Verification Report Conclusions**

Talon LPE as the Verification 3<sup>rd</sup> party Auditor for Sun Communities, Inc. 2022 ISO 14064-3:2019 and Corporate Greenhouse Gas Protocol Reporting with the Audit Boundary of Financial Control finds the following:

- 1) All Data and or Proxy Data is accurate to utility bills, vendor tickets, or correct assumptions in developing the Proxy Data.
- 2) All GHG Factors used are issued by a nation country program for the location of the Sun Community, Inc. Community Locations. GHG Factors are current national factors issued for the 2022 reporting year.
- 3) All Calculation using the Country Specific GHG Factors are calculated correctly. Data sources and or Proxy Data that occurred in units not matching the GHG Factors were converted to match the Country Specific GHG Factors through standard engineering conversions. All CO<sub>2</sub>e Calculation Totals are converted to Metric Ton CO<sub>2</sub>e to allow annual reporting and comparison.
- 4) All ISO 14064 Categories 1 through 5 used in the Reporting are aligned with the Corporate GHG Protocol Scopes 1 through 3.
- 5) Talon LPE External 3<sup>rd</sup> Party Compliance Audit of the 2022 Sun Communities, Inc. GHG: Data, Factors, Calculations, and Reporting is correct and found to be **“Reasonable Assurance”**.

In whole or in part Talon LPE as the External Verification 3<sup>rd</sup> Party Auditor on behalf of Sun Communities, Inc. 2022 GHG Emissions Reporting Detailed in this report and other Sun Communities, Inc. documents and reporting meets or exceeds **“Reasonable Assurance”**.



Signature and Contact Information

Appear on Page 9 of this report

If you have any questions or would like additional information on Sun Communities, Inc. GHG Validation, please feel free to contact me directly, my email address is [sfleming@talonlpe.com](mailto:sfleming@talonlpe.com) cell phone 214-435-9994.

Sincerely,

A handwritten signature in blue ink that reads "Steven Fleming". The signature is written in a cursive, flowing style.

Steven Fleming, P.G.  
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