



# FOREVERPROJECT

**BUILDING A SUSTAINABLE TOMORROW** 

2030 MASTER PLAN

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# MESSAGE FROM OUR CEO

Dear Team Members and Friends,

Our 75-year journey as a resort company defines and demonstrates a heritage of stewardship, leadership, creativity, and innovation. Today, as Boyne Resorts endeavors to transform the North American four-season resort experience, we must also aim to help lead our industry and communities toward a sustainable tomorrow, ensuring our next 75 years and future generations are afforded the same quality of life we have and that our resorts represent. It is with this backdrop that we launched our ForeverProject.

The ForeverProject Master Plan will guide us in this mission and reflects our culture of embracing new technologies and ways of doing business. The Plan outlines efforts necessary to reach our aggressive net zero carbon emissions by 2030 goal and supports our commitment to be a leader in sustainable business practices. It is important that each of us embrace the guidance it provides. This will not only increase the likelihood of achieving these goals ourselves, it will also help inform, motivate and educate others in this critical effort. Mitigating the impacts of climate change is a responsibility each of us carries and can be accomplished together as individuals and as a company, nation, and united world.

Your contributions to our recent progress are greatly appreciated and I am hopeful you will be a proud advocate and supporter of these important efforts at work and in your communities.

Sincerely,

Stephen Kircher

At let

President and CEO Boyne Resorts



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## **ACKNOWLEDGEMENTS**

Achieving Boyne Resorts' ForeverProject goals requires action and collaboration throughout our operations, commensurate with the scale of the challenge ahead. Our commitment to collaboration is reflected in the creation of this plan, which incorporates coordinated input from representatives at each resort, alongside that of corporate leadership.

Many thanks go to all who contributed to this plan and will continue to bring it to life in the coming years as we work together to build a more sustainable tomorrow.

#### FOREVERPROJECT MASTER PLAN LEADERSHIP TEAM

Special thanks to the core team that tirelessly led the development of Boyne Resorts' ForeverProject Master Plan:

Amy Fonte, Big Sky Resort Brad Keen, Boyne Resorts Mari Kissinger, The Highlands Taylor Middleton, Boyne Resorts Jay Scambio, Boyne Resorts

Input from each resort team and our corporate team was critical to the creation of a plan that will guide action in every area of our operations. Many thanks to those who provided support and encouragement throughout the development process:

Roland Andreasson, Boyne Resorts Julie Ard, Boyne Resorts Frederic Barbier, Boyne Resorts Dan Beeler, Boyne Resorts Mac Bevier, Loon Mountain Mike Chumbler, The Highlands Aaron Clark, Boyne Mountain Keith Collins, Boyne Resorts Jeremy Cooper, Boyne Resorts Michael Costello, Inn at Bay Harbor Jenn Dickie, Cypress Mountain Mike Doyle, Jr., Brighton Resort Bernie Fredrich, Boyne Resorts Ed Grice, Boyne Mountain Brian Heon, Sunday River Nick Herrin, Boyne Resorts Beatrice Johnson, Sugarloaf Stephen Kircher, Boyne Resorts

Nick Lambert, Boyne Resorts Tara Lauder, The Summit at Snoqualmie Guy Lawrence, The Summit at Snoqualmie Abby Layton, Brighton Resort Ralph Lewis, Pleasant Mountain Nate Maclure, Pleasant Mountain Kate Matthews, Sunday River Troy Nedved, Big Sky Resort Brian Norton, Loon Mountain Jason Perl, Boyne Mountain Josh Richter, Boyne Resorts Barb Rooney, Boyne Resorts Brendan Ryan, Boyne Resorts Karl Strand, Sugarloaf Bob Turner, Boyne Resorts Mike Unruh, Boyne Resorts Randy Watson, Gatlinburg SkyLift Park Cathy Witherspoon, Boyne Resorts

#### **BRENDLE GROUP CONSULTANT TEAM**

Imogen Ainsworth, Master Plan Lead Judy Dorsey, Project Manager Katie Kershman, Graphic Design Zakri Siegel, Data Analytics Becca Stock, Project Scenario Modeling





# BOYNE RESORTS 2030 MASTER PLAN EXECUTIVE SUMMARY



Throughout our 75-year history, Boyne Resorts has created a legacy of environmental stewardship and conservation. From patenting our highly efficient snowmaking equipment nearly 50 years ago to achieving 100% clean electricity across our operations in 2021, we are mindful in prioritizing creative and innovative initiatives to protect, preserve, and sustain the land on which we depend.

While we are proud of our progress, we know that the next few years will be the most important yet if we are to mitigate impacts of the global climate crisis we currently face. Acknowledging our responsibility to do everything in our power to leave a positive legacy for future generations, Boyne Resorts is committed to achieving **net zero greenhouse gas emissions across our operations by 2030**.

The ForeverProject Master Plan was developed to provide an understanding of what it will take to get there.

Through engagement with staff and leadership, a significant amount of data and detail was gathered to help quantify the magnitude of the challenge ahead and begin to identify the actions and investments necessary to reach our shared goal. This plan charts a pathway that enables us to reduce our carbon footprint while balancing environmental and economic sustainability.

## GOALS

NET ZERO EMISSIONS

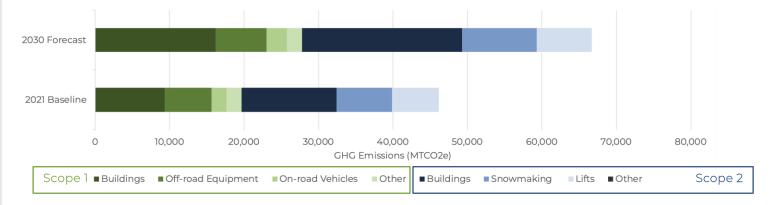
Boyne Resorts is committed to a goal of reducing carbon emissions to net zero throughout our North American operations by 2030.

100% CLEAN ELECTRICITY

An important step in reaching our net zero carbon emissions goal is to power all resorts and facilities with 100 percent clean electric energy.

#### **OUR EMISSIONS TODAY AND IN 2030**

To map a pathway to net zero emissions, we first needed to understand our current emissions and future trajectory.

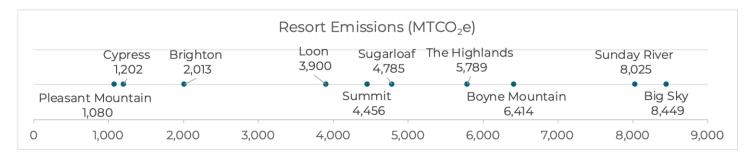


Boyne Resorts FY 2020-21 Baseline and FY 2029-30 "Business-as-Usual" Greenhouse Gas Emissions Forecast

Our company-wide fuel and electricity emissions (Scopes 1 and 2) for financial year 2020-21 was calculated. We then developed a 2030 "Business-As-Usual" emissions forecast for financial year 2029-30 that accounts for anticipated growth in terrain, buildings, lifts, snowmaking, and annual visitation at each resort. Without swift and ambitious action, Boyne Resorts' total emissions could rise by 45% within the next seven years.

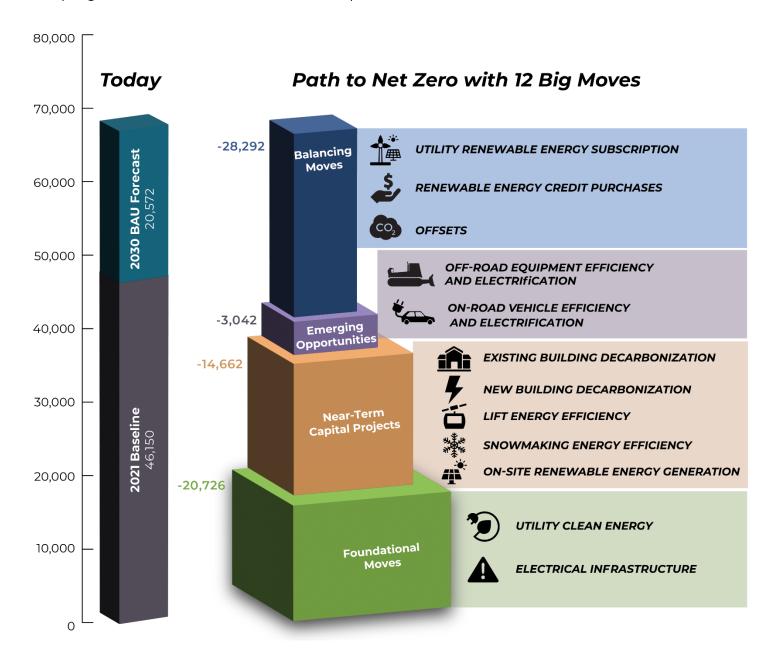
#### **RESORT-SPECIFIC EMISSIONS**

Recognizing the unique characteristics of each of our resorts, individual emissions inventories and forecasts were created to inform the development of resort-specific pathways and action plans. The chart below summarizes total emissions by resort.



#### PATHWAY TO NET ZERO EMISSIONS

Twelve high-impact actions were identified that cumulatively will propel us forward in the pursuit of our aggressive, yet attainable net zero emissions and 100% clean electricity goals. These actions are Boyne Resorts' Big Moves and they represent our commitment to unprecedented collaboration and progress on climate action across our operations.



The ForeverProject Master Plan defines a clear and strategic pathway with immediate, and short- and medium-term action steps identified for each Big Move. The plan also highlights staffing considerations along with opportunities for corporate leadership and support for resort-scale projects and initiatives.

In bringing our Big Moves to life, we are not only reducing our carbon footprint, we are realizing utility bill and maintenance cost savings, improved health and



safety, and an enhanced resort experience for team members and guests. Boyne Resorts is committed to continuing our current climate investment and ramping our level of investment to meet the scale of the challenge ahead. In addition, we recognize the importance of leveraging external funding to further accelerate our pathway to net zero.



As move forward with we implementation, diligent tracking and consistent reporting on our progress can be expected. Annual reporting and bi-annual modeling updates for NSAA's Climate Challenge is also a source of progress measurement. Tracking includes evaluating how our Big Moves are playing out on the ground and is key to being prepared to adjust our course of action, if needed.

Finally, we are excited about the opportunities for partnership that this ForeverProject Master Plan creates. We

are not alone in this journey and look forward to collaborating with industry peers and local partners at each of our resorts to realize our goals over the next critical seven years.

"Greatness is not a function of circumstance. Greatness, it turns out, is largely a matter of choice and conscious discipline."

- Jim Collins

# **RESORT PROFILES**

Our Boyne Resorts ForeverProject Master Plan describes twelve Big Moves to meet our net zero carbon emissions goal by 2030. While this effort requires company-wide planning and action, each resorts' attraction, and division is unique, requiring a customized approach. This section of the Master Plan includes resort-specific analysis and dedicated profiles outlining each property's unique pathway to net zero (Figure 11).

These profiles were developed using data provided by each property, input received during planning workshops, and additional context provided through internal surveys.

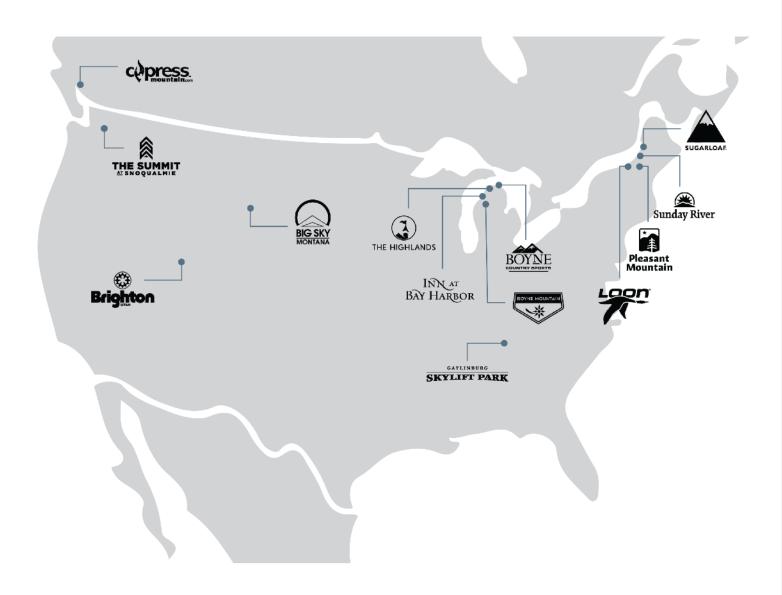


Figure 11. Boyne Resorts Properties

### NET ZERO EMISSIONS AT EACH BOYNE RESORTS PROPERTY

Due to the unique characteristics of properties, we developed an emissions inventory, a 2030 forecast, and an individual Net Zero Pathway for each one.

	Property Name	FY 2020-21 Baseline (% of company-wide total)	FY 2029-30 Forecast (% of company-wide total)	Foundational Moves	Near-Term Capital Projects	Emerging Opportunities	Balancing Moves	
7.	Big Sky Resort	8,449 MTCO₂e (18%)	20,450 MTCO₂e (31%)	12%	18%	2%	67%	
*	Sunday River Resort	8,025 MTCO₂e (17%)	9,393 MTCO₂e (14%)	46%	19%	5%	31%	
	Boyne Mountain Resort	6,414 MTCO₂e (14%)	7,074 MTCO₂e (11%)	40%	29%	1%	31%	
<b>X</b> *	The Highlands	5,789 MTCO₂e (13%)	7,757 MTCO₂e (12%)	33%	44%	3%	20%	
*	Sugarloaf	4,785 MTCO₂e (10%)	6,097 MTCO₂e (9%)	42%	21%	9%	29%	
_	The Summit at Snoqualmie	4,456 MTCO₂e (10%)	5,310 MTCO₂e (8%)	51%	18%	5%	26%	
_	Loon Mountain Resort	3,900 MTCO₂e (8%)	5,413 MTCO₂e (8%)	47%	14%	3%	36%	
*	Brighton Resort	2,013 MTCO₂e (4%)	2,489 MTCO₂e (4%)	15%	13%	12%	59%	
<b>X</b>	Cypress Mountain	1,202 MTCO₂e (3%)	1,588 MTCO₂e (2%)	Ο%	15%	25%	59%	
	Pleasant Mountain	1,080 MTCO₂e (2%)	1,114 MTCO₂e (2%)	39%	9%	15%	37%	
4	Gatlinburg SkyLift Park	37 MTCO₂e (<1%)	37 MTCO₂e (<1%)	12%	48%	0%	41%	
Å	Inn at Bay Harbor	Harbor Data not finalized at time of plan development						
	Boyne Country Sports	L)ata not finalized at time of plan development						
四	Corporate Facilities	porate Facilities Data not finalized at time of plan development						
	Total	46,150	66,722	31%	21%	4%	44%	



# SUGARLOAF 2030 NET ZERO EMISSIONS PLAN



Sugarloaf's 2030 Net Zero Emissions Plan supports Boyne Resorts' commitments to 100% clean electricity and net zero greenhouse gas emissions by 2030. It is based on specific conditions and opportunities at Sugarloaf, located in Carrabassett Valley, Maine.

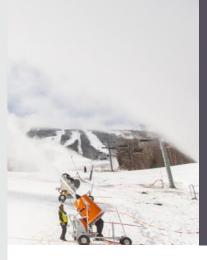
Sugarloaf has the 5<sup>th</sup> highest GHG emissions among Boyne Resorts' portfolio and is above its average for emissions per ski and summer visitor.

### RESORT EMISSIONS COMPARISON (FY 2020-21 BASELINE)



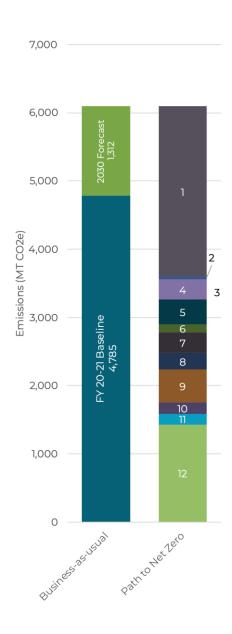
This plan provides the specifics of Sugarloaf's journey to net zero emissions including:

- Breakdown of energy use and GHG emissions by Scope, fuel type, and operations in baseline year FY 2020-21 and forecasted for FY 2029-30
- General factors and performance metrics influencing Sugarloaf's journey to net zero emissions
- Big Moves and their individual contributions to GHG reductions
- Short-term implementation priorities, project highlights, and community partnership opportunities



#### **Project Highlights**

- Improved snowmaking efficiencies with the installation of 250 new highefficiency snow guns and construction of a booster pump house midmountain
- Added four new Level 2 EV chargers at the golf course, with plans to expand EV charger infrastructure in Lot E and the Outdoor Center during the 2022-23 season
- Completed various energy efficiency projects in the base lodge, including LED lighting retrofits and installation of improved insulation and a new heating system and thermostat controls



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Big	Move	- 20	30 Performance Target	Annual Savings Starting in 2030
1	Utility Clean Energy	✓	Emissions factor: 0.070 MTCO2e/MWh	2,498 MTCO2e (41%)
2	Electrical Infrastructure	✓	4% savings of off-road diesel	39 MTCO2e (<1%)
3	Lift Energy Efficiency	✓	n/a	n/a
4	Snowmaking Energy Efficiency	✓	4,222 MWh savings	297 MTCO2e (5%)
5	Existing Building Decarbonization	<b>✓</b>	40% energy use reduction 50% fossil fuel energy use electrified	367 MTCO2e (6%)
6	New Building Decarbonization	✓	Average EUI of new buildings: 65 kBtu/sq. ft. Electrify 100% of typical fossil fuel use	111 MTCO2e (2%)
7	Off-Road Equipment Efficiency & Electrification	✓	30% off-road diesel use reduction	308 MTCO2e (5%)
8	On-Road Vehicle Efficiency & Electrification	✓	70% on-road gasoline use reduction 50% on-road diesel use reduction	240 MTCO2e (4%)
9	On-Site Renewable Energy Generation	✓	271 kW on-site solar PV	484 MTCO2e (8%)
10	Utility Renewable Energy Subscription	✓	115 MWh of electricity use subscribed through utility	161 MTCO2e (3%)
11	REC Purchases	✓	RECs purchased to cover 115 MWh of electricity use	161 MTCO2e (3%)
12	Offset Purchases	✓	Purchase offsets to cover remaining Scope 1 emissions	1,429 (24%)
			Total Impact:	6,097 MTCO2e (100%) <sup>1</sup>

<sup>&</sup>lt;sup>1</sup> Percentages may not add up to 100% due to rounding.

# ENERGY USE BASELINE AND BUSINESS-AS-USUAL FORECAST

For Boyne Resorts' net zero goal, Scope 1 and 2 emissions are considered. Scope 1 emissions result from on-site combustion of fossil fuels to heat buildings and fuel vehicles and equipment, and also from direct release of greenhouse gases from refrigerants used in cooling equipment. Scope 2 emissions account for the emissions released during generation of electricity that is consumed on site. In FY 2020-21, Sugarloaf's energy use was 64,728 MMBtu in total. The breakout of energy usage by end use is shown below along with projected energy use if Sugarloaf continues business as usual.

#### KEY RESORT CHARACTERISTICS

**STATE (CLIMATE ZONE):** Maine (6)

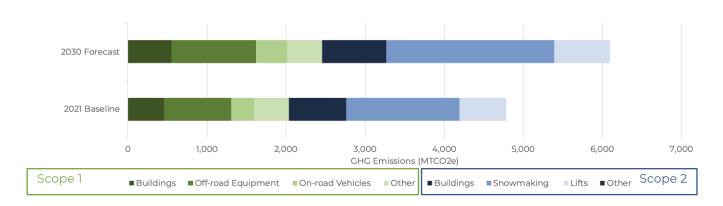
**ELECTRIC UTILITY:** CMP and Constellation

**NEW BUILDING ENERGY CODE: IECC 2015** 

	Fuel	End Use	FY 2020-21 Baseline Use	FY 2029-30 Forecasted Use
	Natural Gas	Buildings	0 therms	0 therms
_	Propane	Buildings	79,862 gallons	96,254 gallons
Scope	Diesel	Off-Road Equipment	83,173 gallons	104,798 gallons
Š	Diesel	On-Road Vehicles	5,383 gallons	6,395 gallons
	Gasoline	On-Road Vehicles	26,357 gallons	37,083 gallons
7	Electricity	Buildings	3,241 MWh	3,632 MWh
Scope	Electricity	Lifts	2,632 MWh	3,156 MWh
Sc	Electricity	Snowmaking	6,403 MWh	9,473 MWh

#### EMISSIONS BASELINE AND BUSINESS-AS-USUAL FORECAST

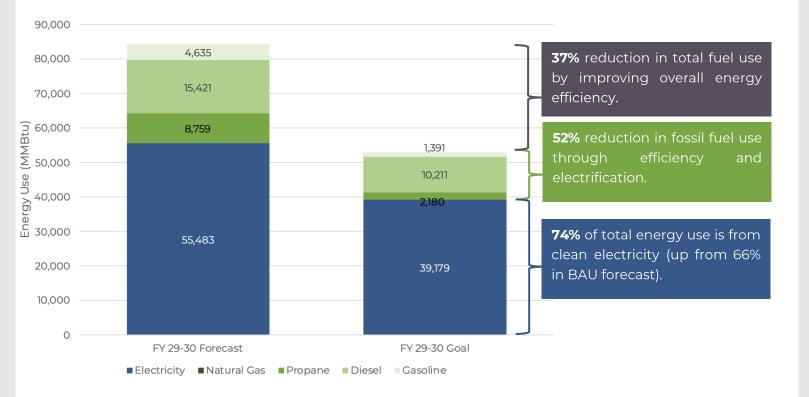
The graph below shows the current GHG emissions (4,785 MTCO2e) at Sugarloaf by Scope, as well as the projected emissions in 2030 (6,097 MTCO2e) if no steps are taken to mitigate emissions.



#### **ENERGY SYSTEM TRANSFORMATION**

Sugarloaf

To reach net zero by 2030, Sugarloaf will need to transform the energy used on site, transitioning from fossil fuel use to clean electricity. The total energy system transformation and some key characteristics of this transformation are shown below:



#### **KEY RESORT CONSIDERATIONS**

- With the West Mountain Expansion project, snowmaking acreage will increase significantly, but electricity usage for snowmaking will decrease with installation of high-efficiency equipment
- Sugarloaf is a remote resort with high exposure to power outages, however, backup generation is currently only used for a few hours outside of more impactful or isolated storms
- Base Lodge boiler is at its end of life and replacement will allow for new and innovative heating solutions
- Significant winds on the mountain as well as ample availability of land could allow for renewable energy generation through small-scale wind turbine projects or solar arrays

#### **KEY PARTNERS**

- Collaborates with <u>Kingfield Elementary</u>, the <u>University of Maine Farmington</u>, and <u>Carabassett Valley</u>
   <u>Academy</u> on educational talks and community events
- Member of <u>Sugarloaf Area Sustainability Initiative</u> (SASI), a group founded in 2018 and composed of community members, and local schools, town council, and Sugarloaf representatives, who collaborate to identify and implement sustainability-related initiatives, creating a culture of awareness and action that goes beyond resort boundaries

# **ADDITIONAL INFORMATION**

We invite you to read the full <u>Boyne Resorts ForeverProject 2030 Master Plan</u>, which can be found on the Boyne Resorts sustainability webpage, to learn more about the following:

#### ForeverProject: Our Commitment to Building a Sustainable Tomorrow

Goals

Objectives

#### **NSAA Climate Challenge and Sustainable Slopes**

#### **Mountain Collaborative for Climate Action**

#### **Company-Wide Master Plan**

A Look Back and Ahead Greenhouse Gas Emissions Profile and Forecast Boyne Resorts Big Moves

- Foundational Big Moves
- Near-Term Capital Projects
- Emerging Opportunities
- Balancing Moves



#### **Other Property Profiles**

Big Sky Resort
Boyne Country Sports
Boyne Mountain Resort
Brighton Resort
Cypress Mountain
Gatlinburg SkyLift Park

Inn at Bay Harbor
Loon Mountain Resort
Pleasant Mountain
Sunday River Resort
The Highlands
The Summit at Snoqualmie



For more information about specific sustainability initiatives at Sugarloaf, visit our Sugarloaf ForeverProject webpage:

www.sugarloaf.com/sustainability



If you have questions, please contact <u>sustainability@sugarloaf.com</u>

Building a sustainable tomorrow by positively affecting the lasting implications our resorts, team members, and guests have on the planet.