

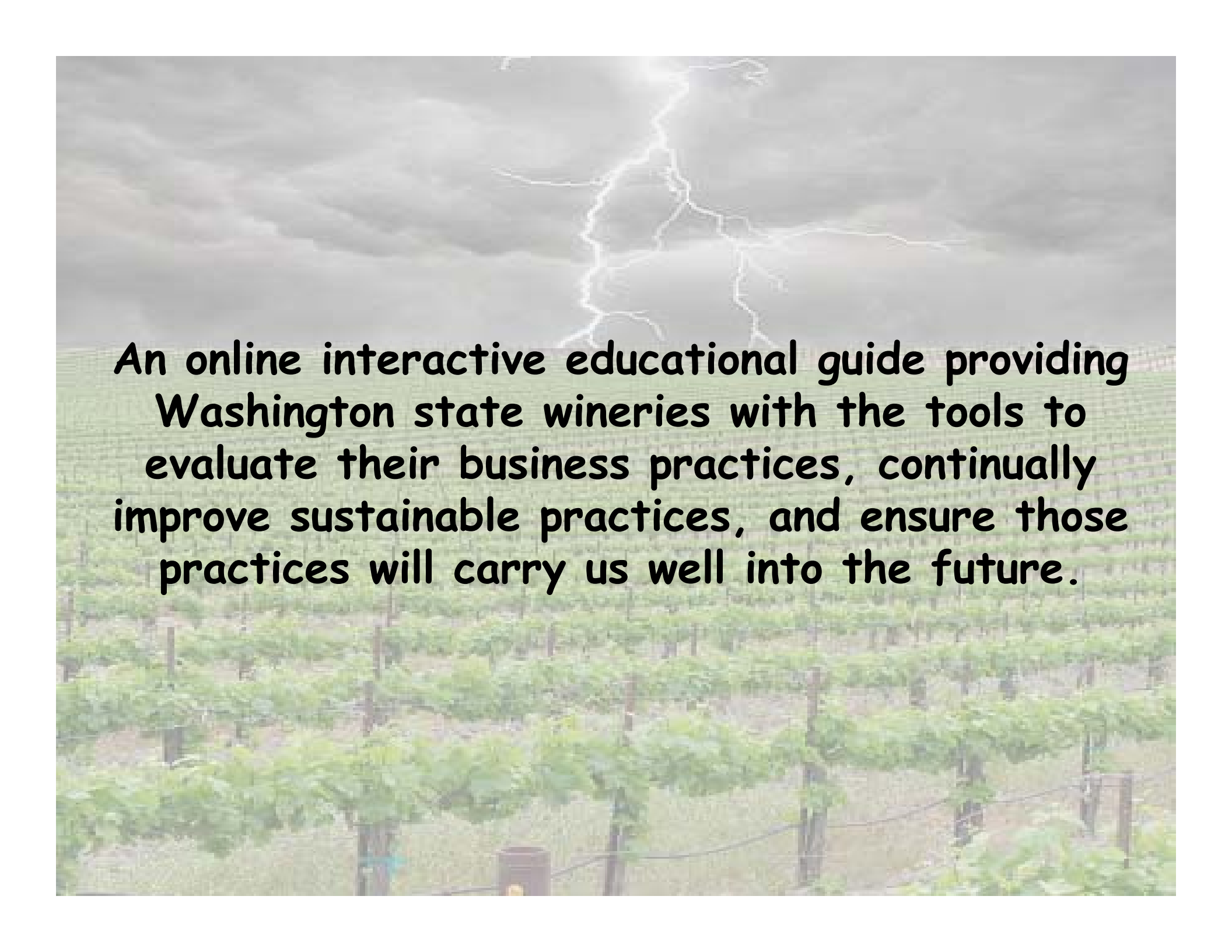
A photograph of a vineyard under a stormy sky. A bright lightning bolt strikes down from a dark, cloudy sky. The vineyard is lush green and stretches across the foreground and middle ground. The text "ENERGY MANAGEMENT FOR WINERIES" is overlaid in the center of the image in a bold, black, sans-serif font.

**ENERGY
MANAGEMENT
FOR WINERIES**


A photograph of a vineyard with a lightning bolt striking the sky. The vineyard is in the foreground, with rows of grapevines stretching into the distance. The sky is dark and cloudy, with a bright lightning bolt striking down from the top center. The text is overlaid on the image.

WINEWISE

**THE WASHINGTON STATE GUIDE
TO SUSTAINABLE
WINEMAKING PRACTICES**

A photograph of a vineyard with a large lightning bolt striking the sky above. The vineyard is in the foreground, with rows of grapevines supported by wooden posts. The sky is dark and cloudy, with a bright lightning bolt striking down from the top center. The text is overlaid on the image in a bold, black, sans-serif font.

An online interactive educational guide providing Washington state wineries with the tools to evaluate their business practices, continually improve sustainable practices, and ensure those practices will carry us well into the future.

A photograph of a vineyard with a lightning bolt striking a tree in the background. The text is overlaid on the image.

Created by and for Washington state wineries, the guide is a collaborative effort drawing from a cross section of the industry with input from regional regulatory agencies, educators, and suppliers.

WA Ecology's TREE Team

LIVE Winery Certification Program

WSU and WWCC

Regional Power Suppliers BPA & Pacific Power

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Snoqualmie Winery

Sagelands Winery

Washington State University

Badger Mountain Winery

Pacific Rim Winery

Two Mountain Winery

Washington Wine Commission

Ste. Michelle Wine Estates

Gordon Brothers Winery

Walla Walla Community College

Administrative Support

-thanks to WAWGG



The Winewise guide is a series of check lists, self-assessment forms, resource links, and action planning aids covering the following specific topics:

Energy Efficiency

Water Management

Education and Research

Solid Waste Reduction, Recycling Management

Staffing, Safety, Employee Relations

Material Handling

Environmentally Preferred Purchasing

Community Outreach

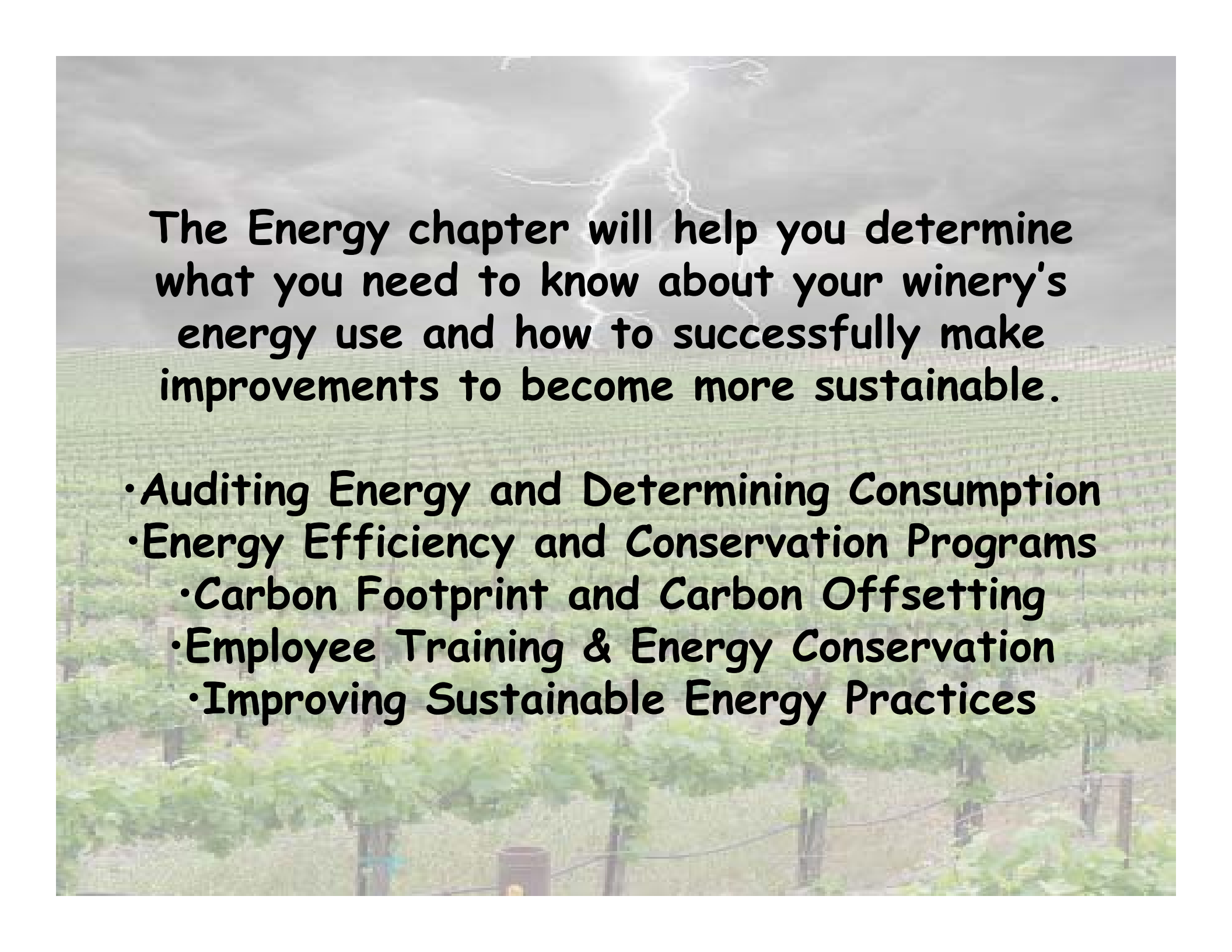
Site Development



REVIEW CHAPTER DRAFTS

- Go to: www.wawgg.org
- hover on the About Wine tab
 - then click on Winewise

We would greatly appreciate your comments
by February 17.

The background of the slide is a photograph of a vineyard. In the foreground, there are rows of grapevines supported by wooden posts and wires. In the background, a large tree is struck by a bright lightning bolt that extends upwards into a dark, stormy sky. The overall scene is somewhat dim and atmospheric.

The Energy chapter will help you determine what you need to know about your winery's energy use and how to successfully make improvements to become more sustainable.

- Auditing Energy and Determining Consumption**
- Energy Efficiency and Conservation Programs**
 - Carbon Footprint and Carbon Offsetting**
 - Employee Training & Energy Conservation**
 - Improving Sustainable Energy Practices**

WHAT IS YOUR CARBON FOOTPRINT ?



A Carbon Footprint is the total set of greenhouse gas (GHG) emissions caused directly or indirectly by a product.

The World Resources Institute GHG protocol is a widely excepted standard procedure and separates GHG into three scopes:

Scope 1) direct - from internal controlled sources

Scope 2) indirect - from externally generated electricity

Scope 3) indirect - purchase of externally produced items

The most significant GHG's are:
CO₂, CH₄, N₂O, SF₆, HFC's and PFC's

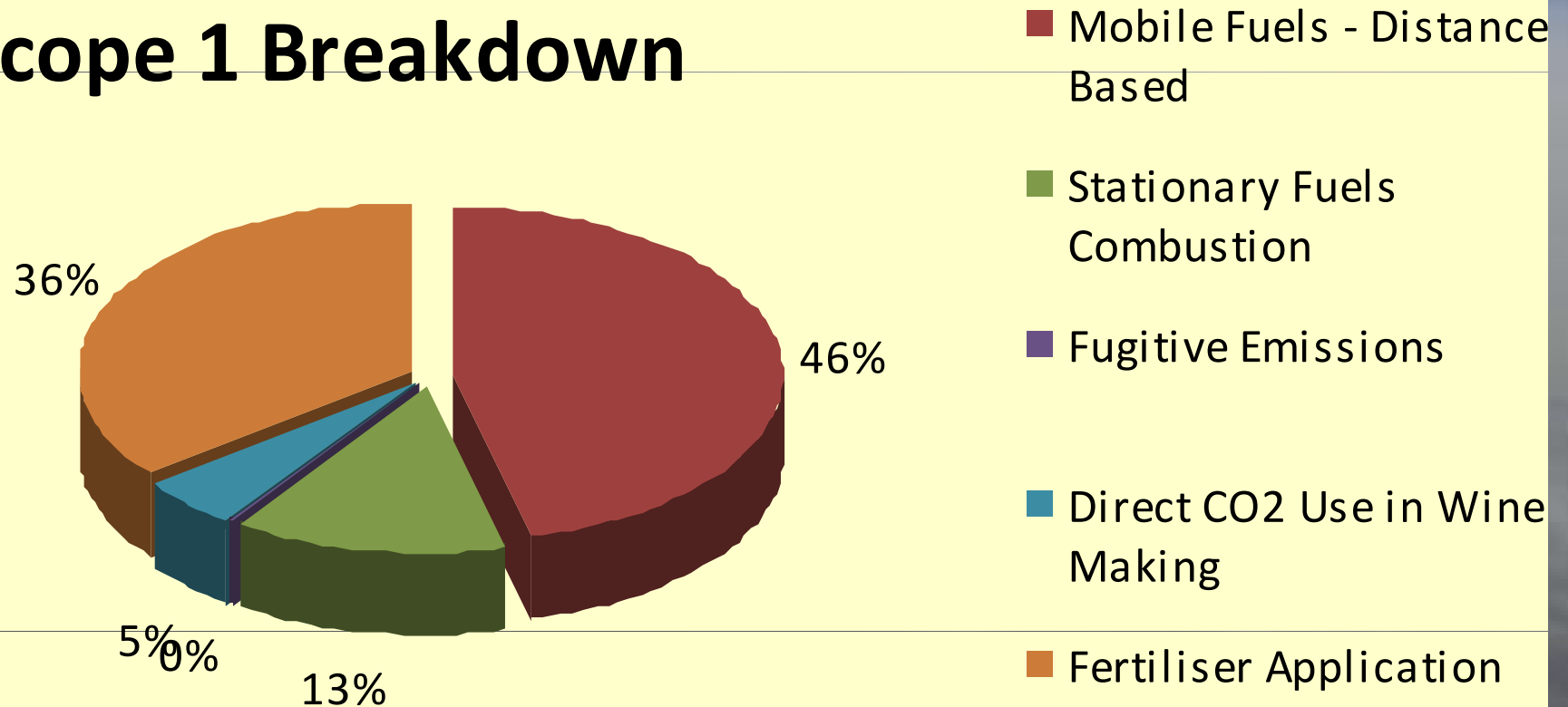
Of these six, CO₂ has the smallest GHG effect per ton but is the most abundant.

CO₂ equivalent (CO₂e) is used as the unit for calculating the combined effect of all GHG.

Snoqualmie Preliminary GHG Emissions Summary

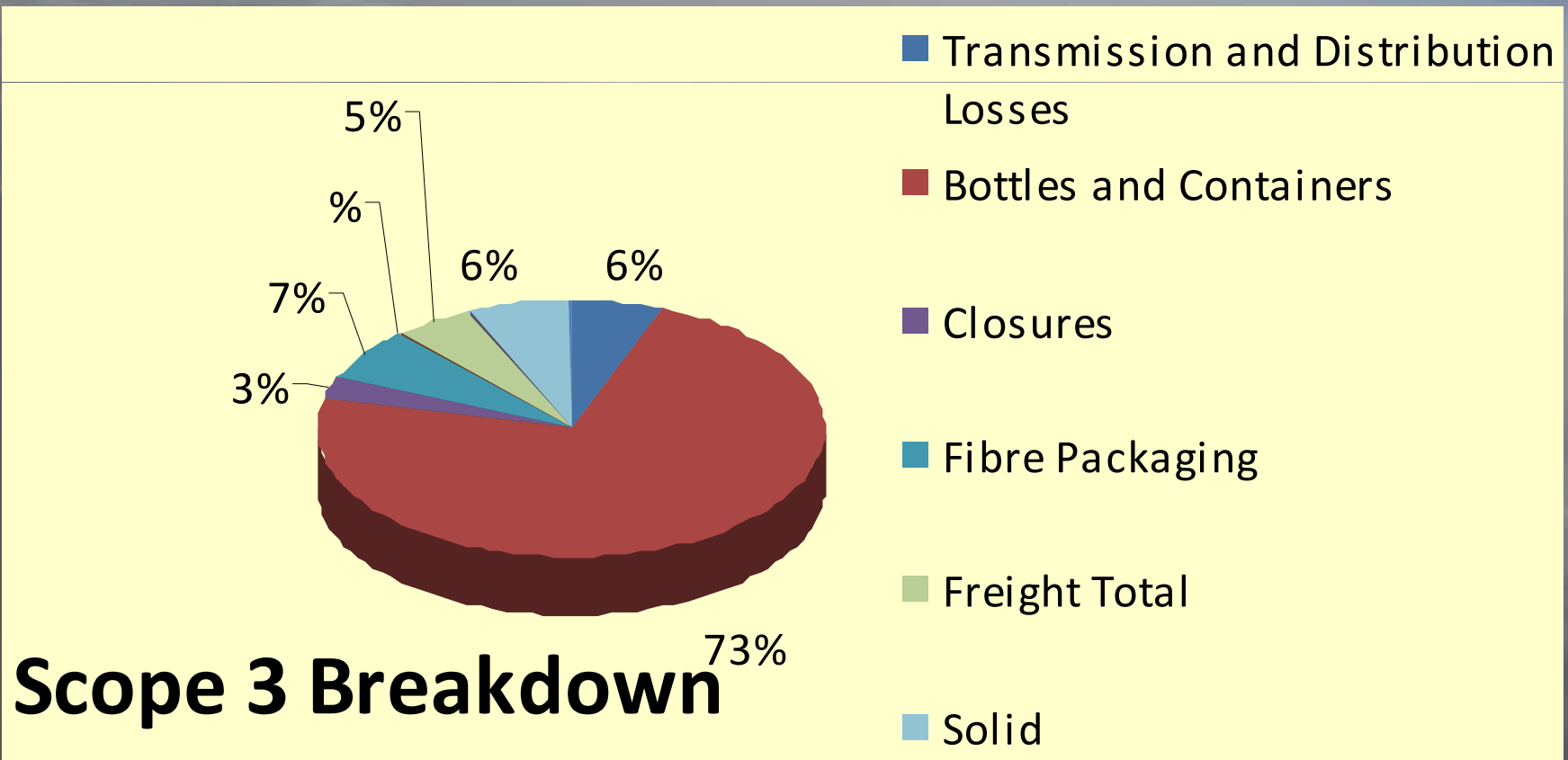
Scope 1 total = 24 ton

Scope 1 Breakdown



Scope 2 total = 512 ton (purchased power)

Scope 3 total = 2900 ton



GHG programs that may impact the Washington wine industry in the future include:

EPA's new reporting system requiring emitters of CO₂e > 25,000 metric tons/year.

The American Clean Energy and Security Act, this goes before the senate in 2010.

Washington State is a member of the Western Climate Initiative and the Climate Registry among other organizations pursuing similar goals.

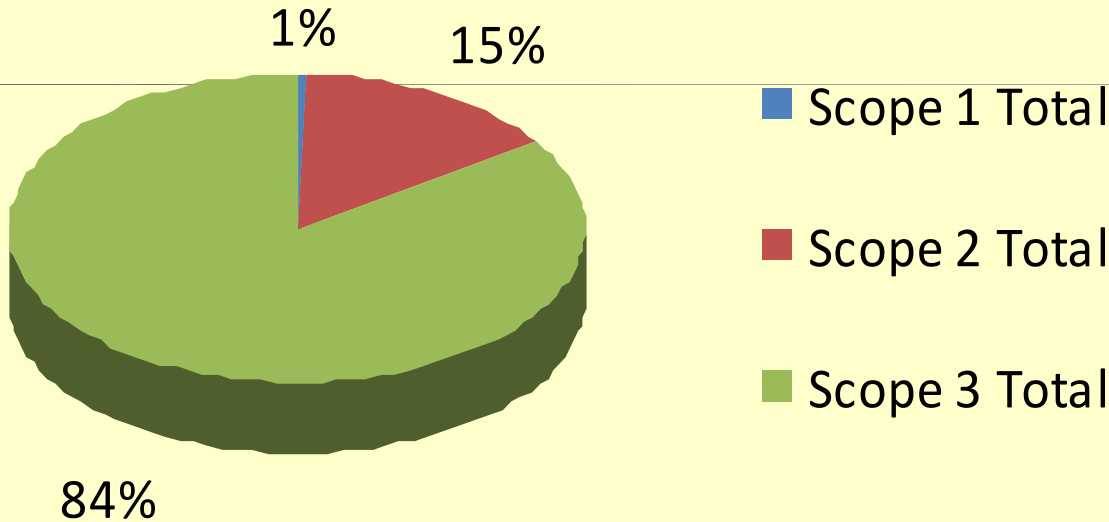
UK PAS 2050 program with goal of requiring embodied carbon values to be included on all food product labels.





International Wine Carbon Calculator
www.wineinstitute.org/ghgprotocol

Scope Comparison





WINEWISE CHALLENGES WASHINGTON WINERIES TO A BOTTLE WEIGHT THROWDOWN

Some are tethered to big 31oz bottles

The more progressive are using 16oz bottles

While still others have moved to 14oz bottles

A few are even trying the new 10.55oz bottles

WINEWISE FOCUS ON GLASS RECYCLING

Currently exploring the possibility of placing a couple glass collection sites at wineries along I82 for ease in transport to the new Ecullet plant in Seattle.



ENERGY MANAGEMENT FOR WINERIES