



## Announcing FLORIS Version 3.3

The National Renewable Energy Laboratory's (NREL's) [FLOw Redirection and Induction in Steady State \(FLORIS\)](#) version 3.3 (v3.3) is now available.

Although this release primarily includes improvements to the code structure, **we recommend all users upgrade to capture a few important fixes and upgrades**. All changes are itemized in the section titled "Updates in FLORIS v3.3", and instructions on upgrading can be found in the section titled "How To Upgrade FLORIS."

### Updates in FLORIS v3.3

The full list of changes, along with their corresponding commit, is available in [the release listing on GitHub](#).

Critical updates in v3.3 include:

- A bug fix to correct yaw settings that were previously ignored when changing to zero from a non-zero through `FlorisInterface` (PR #512)
- A bug fix to correct violated boundary constraints during layout optimization with SciPy (PR #576)
- The addition of turbine weighting to wind rose AEP calculations to support modeling farm-farm interactions (PR #541)
- The addition of a parallel computing interface for farm simulations and yaw optimization (PR #555)
- Updates to outdated layout plotting routines (PR #496)
- A setting for heterogeneous wind speeds through `FlorisInterface.reinitialize` (PR #543)
- The addition of a linear wind condition up-sampling method to `WindRose` (PR #544)
- Support for a user-specified external turbine library (PR #568)

### Next Major Release in May

The next major release, v3.4, is planned for mid-May 2023 and will include the following important enhancements:

- Modeling capabilities for floating turbines through Cp and Ct corrections
- A new model of wakes and wake steering designed for turnability ease
- Capabilities for probing arbitrary points in the flow
- Modeling capabilities for tilt deflection
- Improvements to turbine modeling and grid point selections.

If you are interested in previewing these features prior to release, please reach out either via email to [Paul Fleming](#) or through GitHub (see How To Engage With FLORIS and FLASC Community below). Additionally, you can follow along with progress toward this release through [the v3.4 milestone on GitHub](#).

The next major version of [the FLORIS-based Analysis for Supervisory Control and data acquisition \(FLASC\) tool](#) will also be released with FLORIS v3.4.

## Upcoming Mini Symposium at WESC 2023

For attendees of the [Wind Energy Science Conference \(WESC\)](#) in Glasgow, United Kingdom, in May 2023, NREL's FLORIS team, the Technical University of Denmark's PyWake team, and Fraunhofer IWES's FOXES team are co-organizing a mini symposium on Open Source Wind Farm Flow Model. This symposium is also a joint collaboration between the International Energy Agency Wind Technology Collaboration Programme (IEA Wind) Task 37 and IEA Wind Task 44.

If you are a user or a developer of any of these three tools, we strongly encourage you to submit an abstract. The symposia is structured in two phases, the first is mainly focused on the user community of the tools, and the second is more focused on the developers modifying those tools.

Learn more about the [mini symposium at the event website](#).

## How To Upgrade FLORIS

For full installation and upgrade instructions, please see the [installation documentation on GitHub](#).

If you have installed FLORIS with PyPI or Conda, you can upgrade to the latest version using your package manager by pasting the corresponding command below into a terminal:

```
conda update floris
pip install floris --update
```

Alternatively, if you've installed FLORIS through a local clone of the repository, you can upgrade by pulling the latest release with the following commands:

```
git fetch --all

# If you've made uncommitted changes to the code
git stash

# "origin" should be replaced by the appropriate remote
name
git pull origin main

# Restore any uncommitted changes stashed
git stash pop

# Install locally
pip install -e .
```

## How To Engage With the FLORIS and FLASC Community

FLORIS leverages the following features of GitHub to coordinate support and development efforts:

[Discussions](#): Collaborate to develop ideas for new use cases, features, and software designs, and get support for usage questions

[Issues](#): Report potential bugs and well-developed feature requests

[Projects](#): Include current and future work on a timeline and assign a person to "own" it.

On GitHub, the first entry point for the community is generally within one of the categories in the [Discussions](#). [Ideas](#) is a great spot to develop the details for a feature request. Find usage support in the [Q&A](#) section. As a freeform space, [Show and Tell](#) allows users to show off the things they are doing with FLORIS.

Guidelines for interacting with the repository with git and GitHub are available in the [developer documentation](#).

~~~

If you have additional input, no longer wish to receive updates on FLORIS, or just discovered FLORIS and would like to start receiving updates, please send an email to [Paul.Fleming@nrel.gov](mailto:Paul.Fleming@nrel.gov).

*This work was authored by the National Renewable Energy Laboratory, operated by Alliance for Sustainable Energy, LLC, for the U.S. Department of Energy (DOE) under Contract No. DE-AC36-08GO28308. Funding provided by the U.S. Department of Energy Office of Energy Efficiency and Renewable Energy Wind Energy Technologies Office. The views expressed in the article do not necessarily represent the views of the DOE or the U.S. Government. The U.S. Government retains and the publisher, by accepting the article for publication, acknowledges that the U.S. Government retains a nonexclusive, paid-up, irrevocable, worldwide license to publish or reproduce the published form of this work, or allow others to do so, for U.S. Government purposes.*

[NREL.gov](https://www.nrel.gov)

View NREL on Social Media

[Facebook](#) | [LinkedIn](#) | [Twitter](#)

---

[Unsubscribe from this list.](#)

[Learn more about NREL's security and privacy policies.](#)

NREL is a national laboratory of the U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy, operated by the Alliance for Sustainable Energy, LLC.