

GridControl

A new WindStax Service

IXD2 A3 SPRING 2022

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Client Overview

WindStax® Energy



Project Overview

1. Persona
2. Design Brief
3. Final Prototype
4. Value Creation

PERSONA

Who are we designing for?

“Prosumers” – Jason

PERSONA



Bio:

A customer who generates and consumes their own energy

Goals:

- Always have power
- Monitor energy level
- Use energy efficiently
- Reduce environmental impact

Frustrations:

- Cannot track energy usage
- Cannot identify problems with equipments

Constraints:

- Lack technical knowledge; would want more direct data viz & suggestions

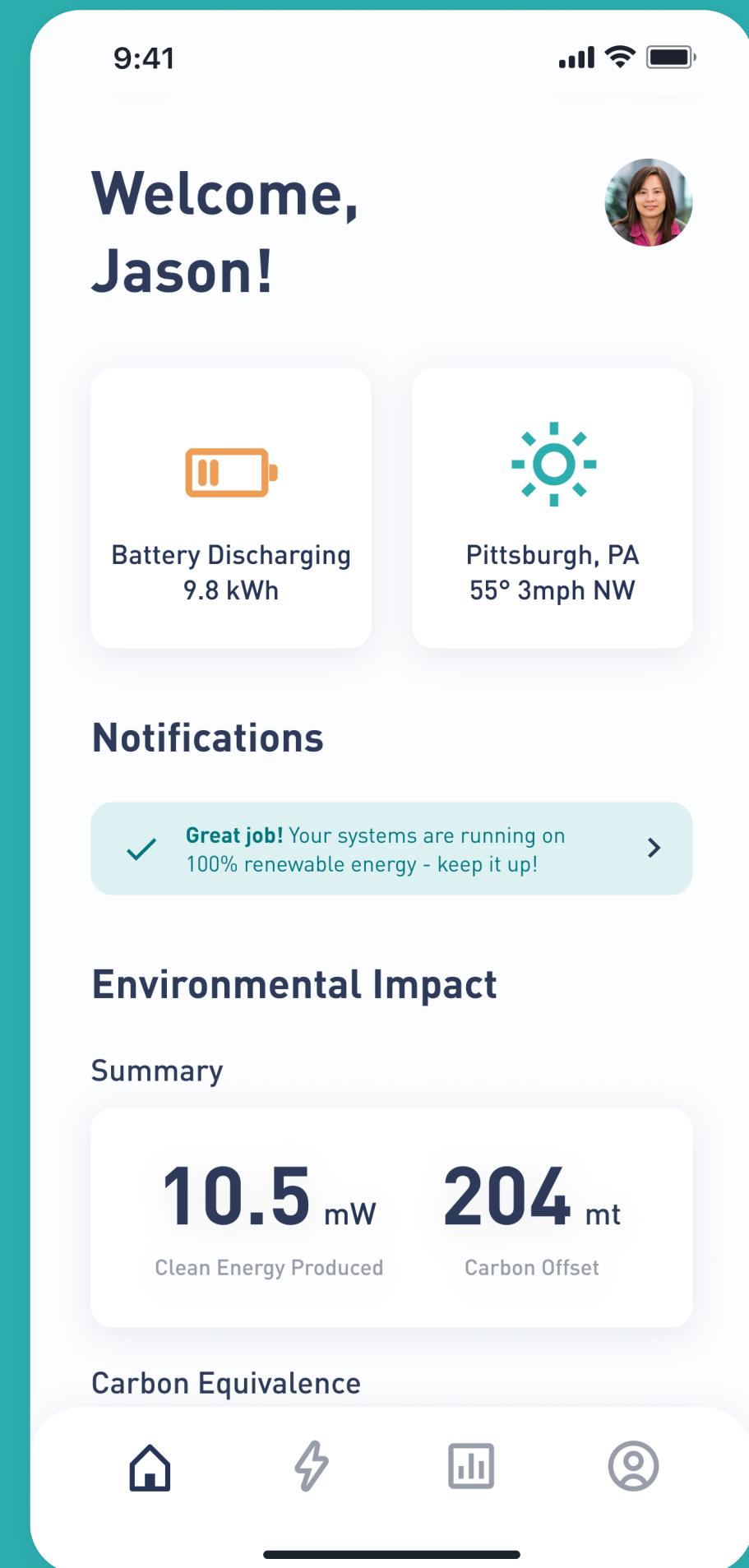
Design Brief

How might we help Jason to monitor his energy levels and use energy in a more efficient and sustainable way?

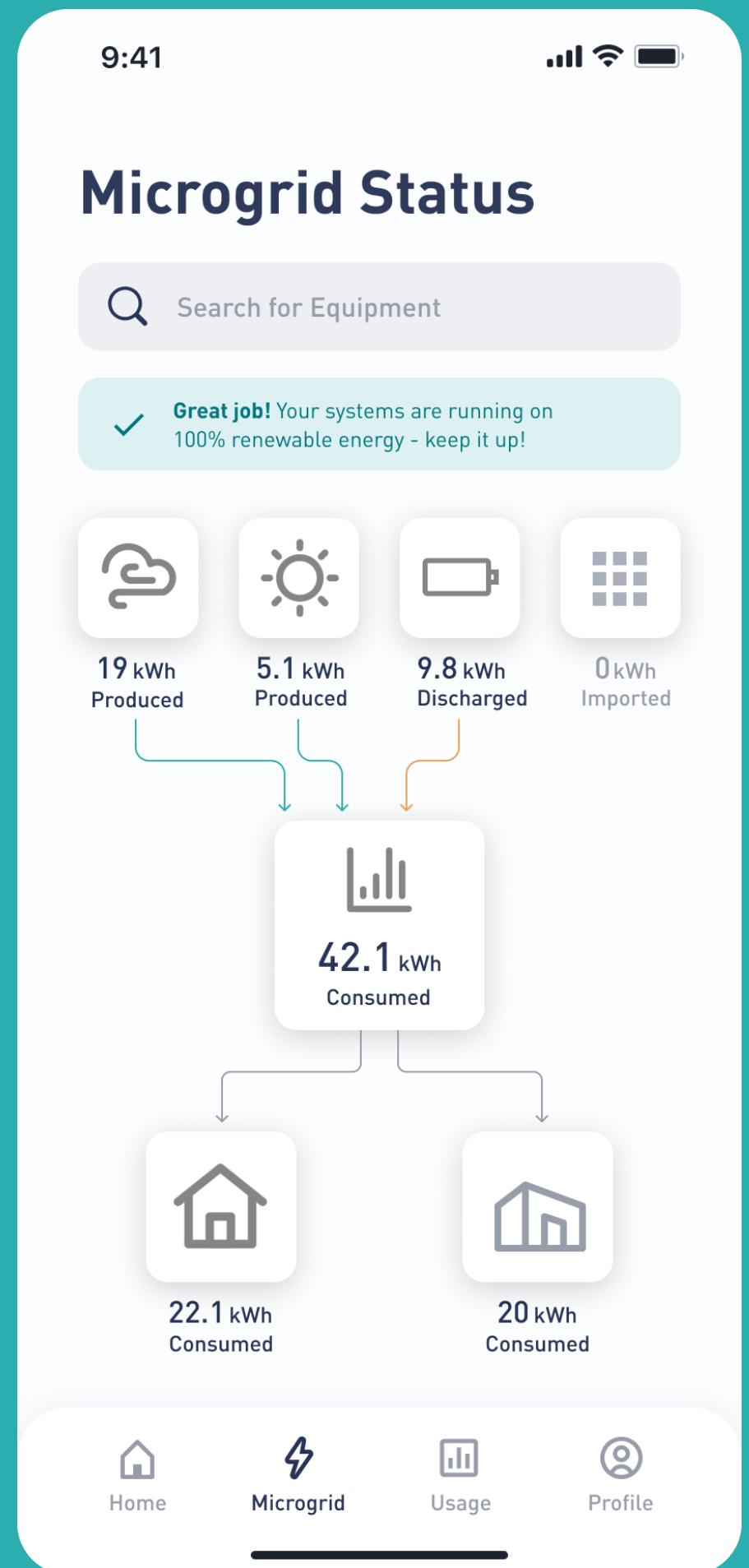
INTRODUCING

GridControl

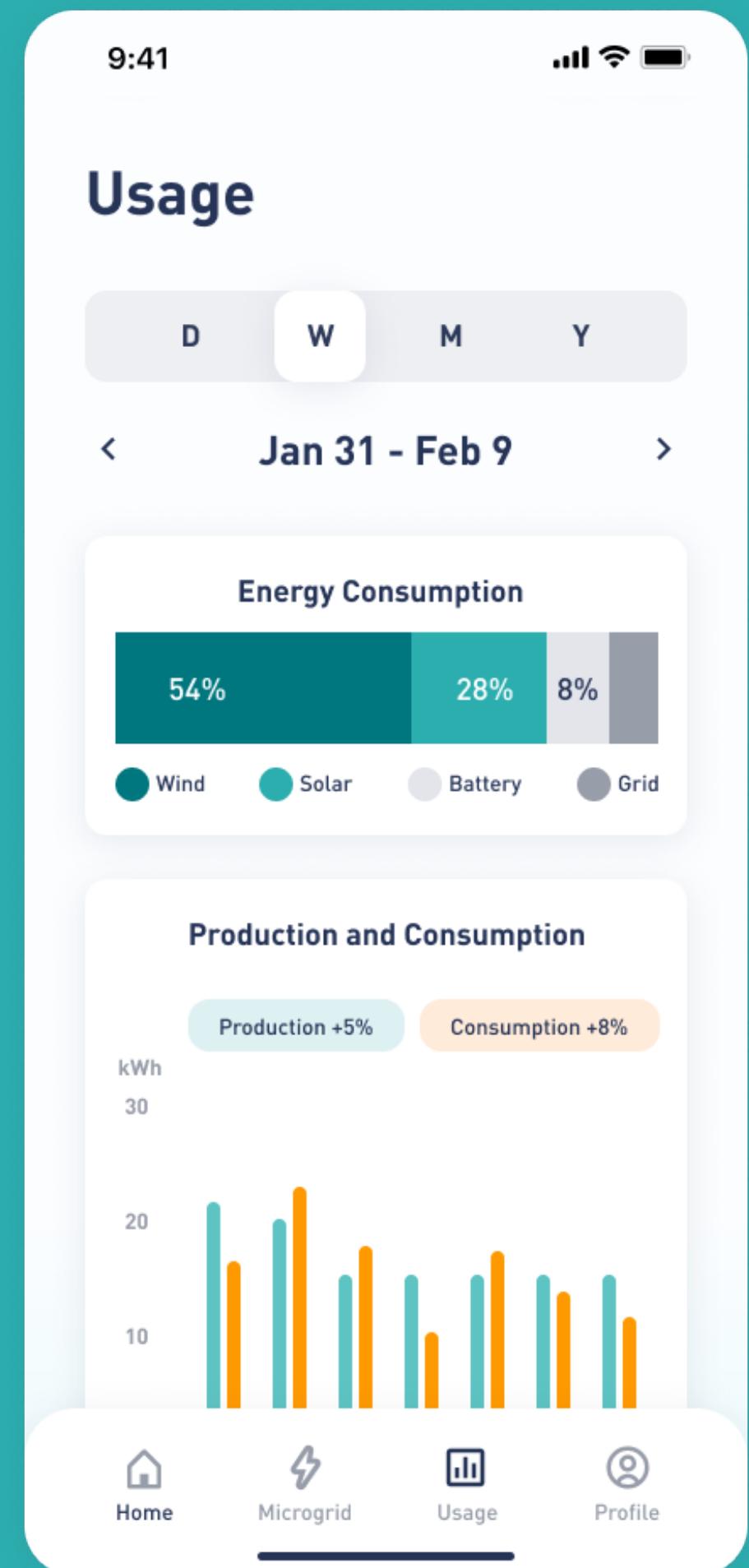
1. Maintain Your Systems
2. Monitor Your Use
3. Modify Your Behaviors



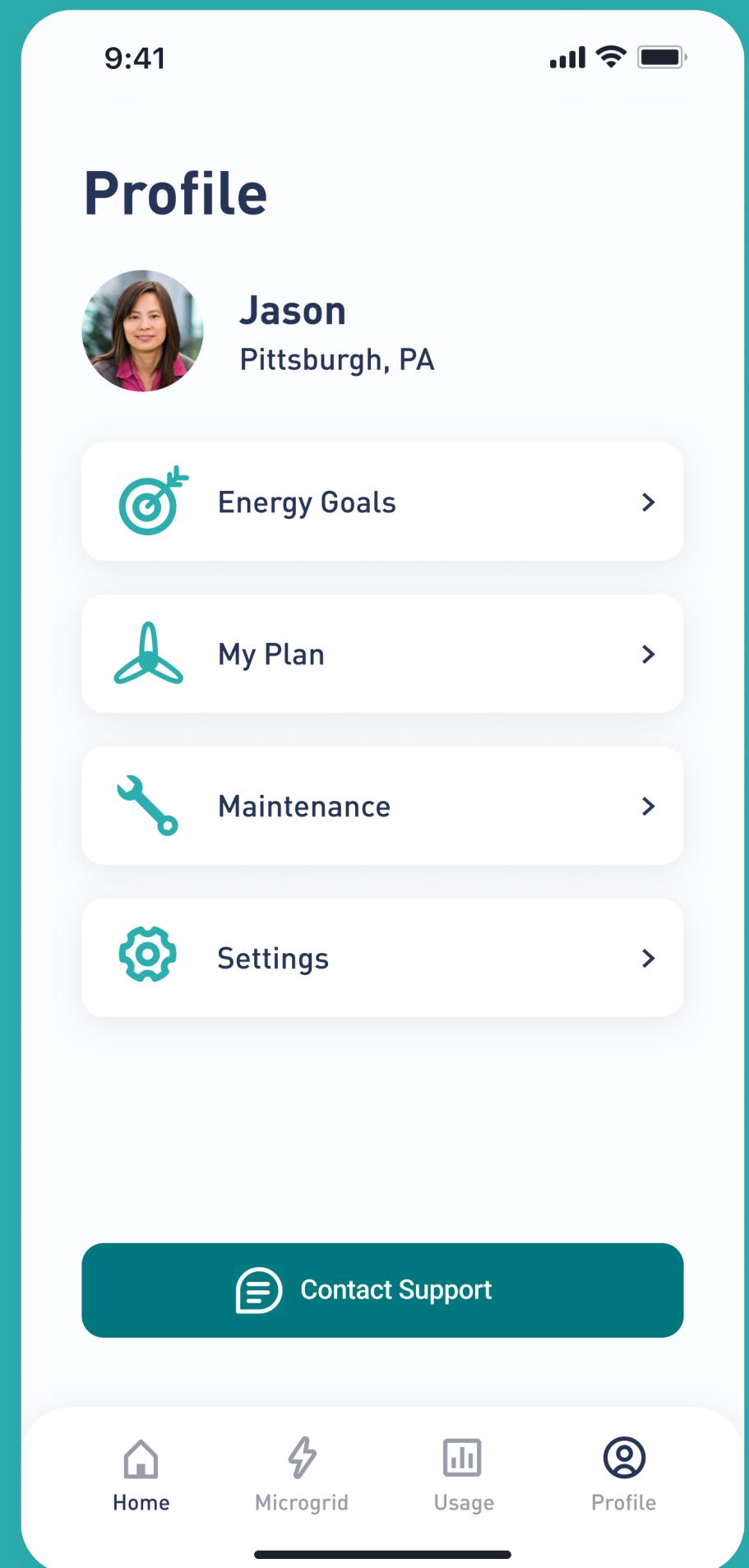
Home Page



Microgrid Status



Usage



Profile

HOME PAGE



Monitor

Maintain →

9:41

Welcome, Jason!

Batteries Depleted

Pittsburgh, PA
55° 3mph NW

Notifications

- Maintenance Alert Turbine 3 malfunctioning
- Extreme Wind Alert Shut down turbines
- Utility Grid Power in Use Recommended to reduce consumption

Environmental Impact

Summary

10.5 mW 204 mt

Clean Energy Produced Carbon Offset

Notifications

- Maintenance Alert Turbine 3 malfunctioning
- Extreme Wind Alert Shut down turbines
- Utility Grid Power in Use Recommended to reduce consumption

Environmental Impact

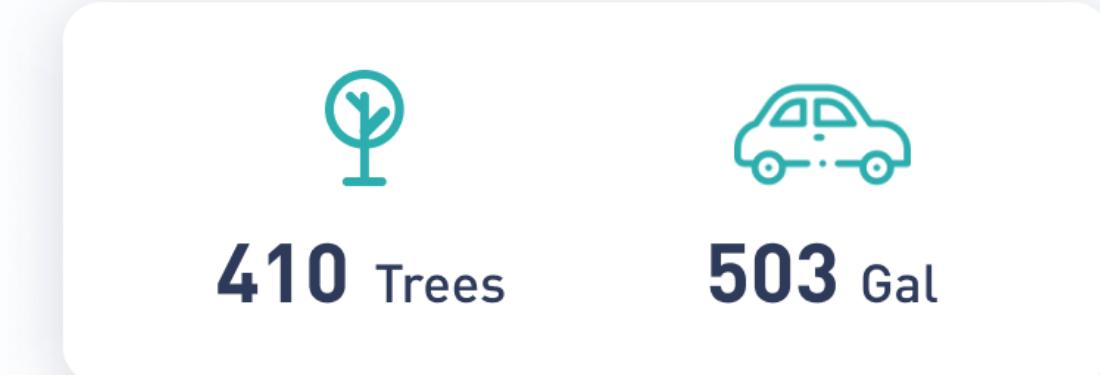
Summary

10.5 mW 204 mt

Clean Energy Produced

Carbon Offset

Carbon Equivalence



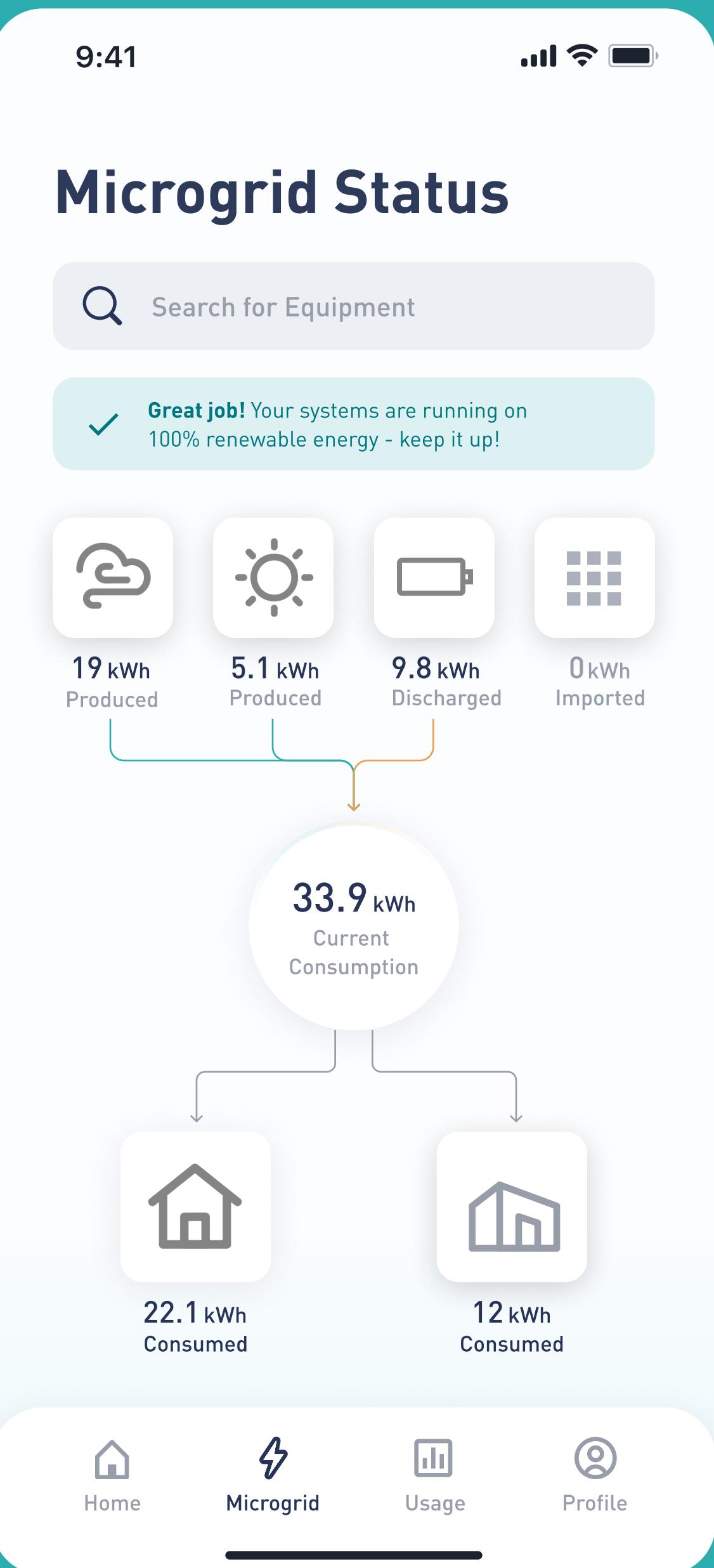
DESIGN BRIEF

Microgrid Status

Monitor and Modify

✓ Great job! Your systems are running on 100% renewable energy - keep it up!

⚠ Utility Grid Power in Use
Recommended to reduce consumption



DESIGN BRIEF

Detail Pages

WIND/SOLAR POWER

9:41

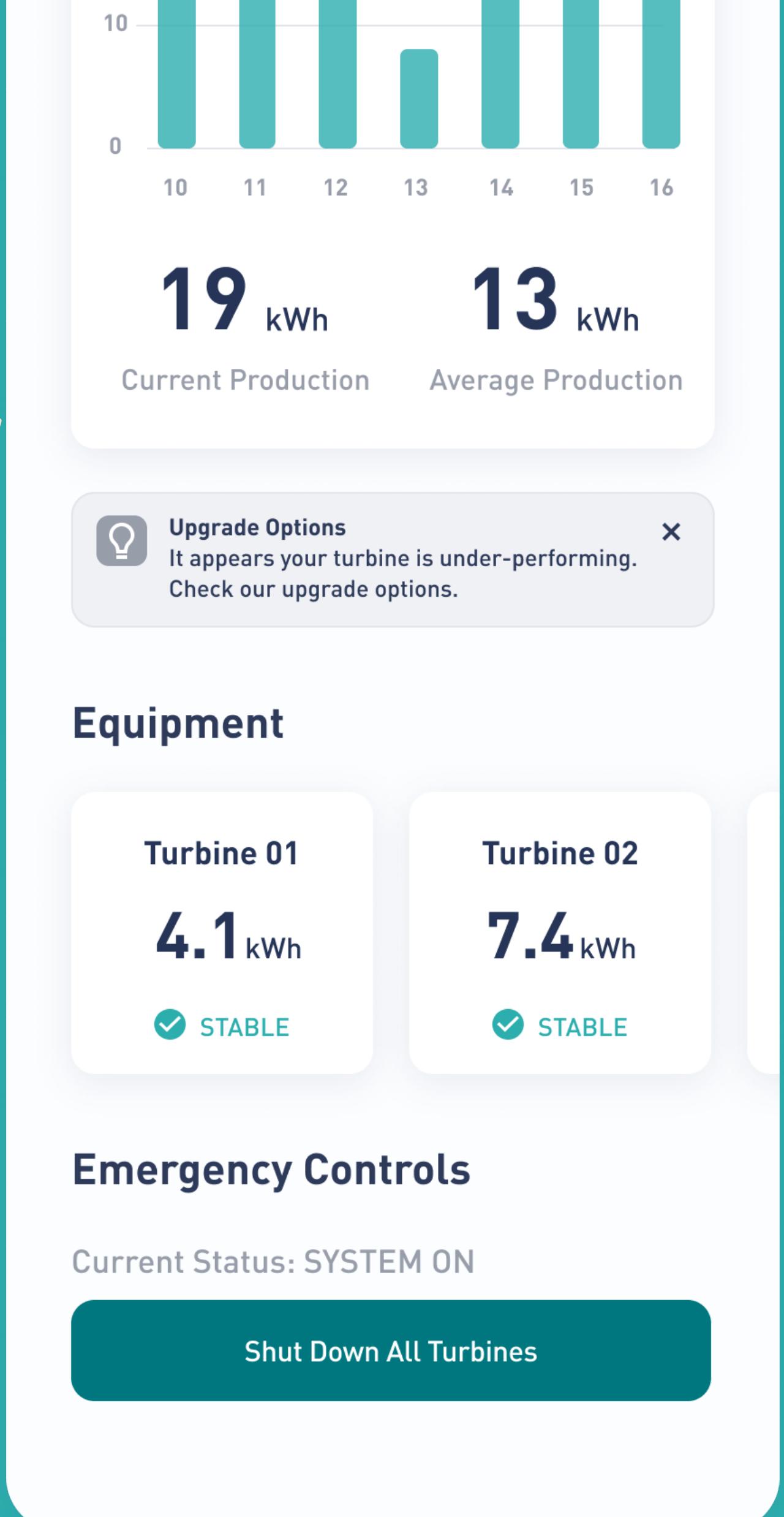
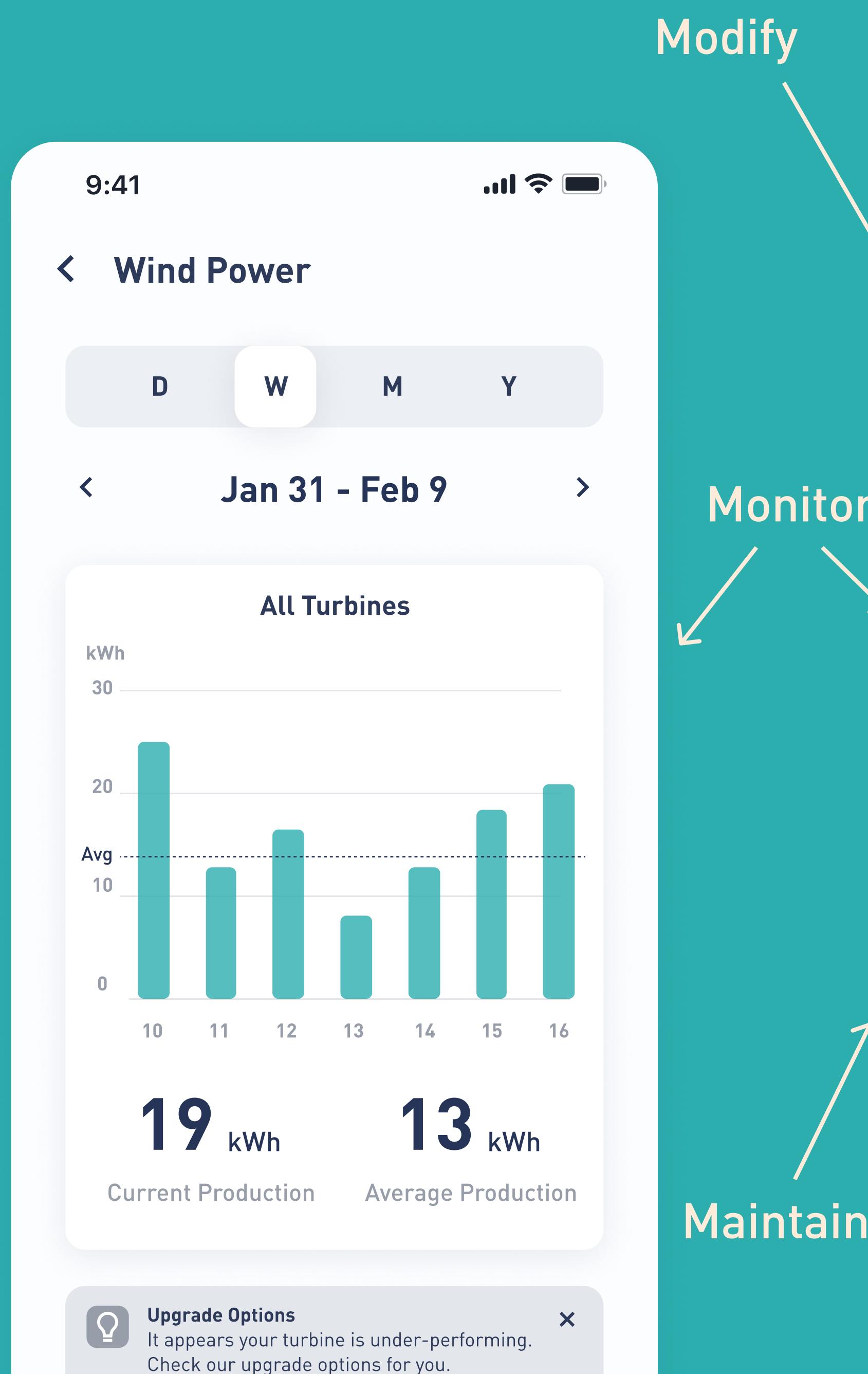
Microgrid Status

Search for Equipment

Great job! Your systems are running on 100% renewable energy - keep it up!

System	Status	Value
Wind	Produced	19 kWh
Solar	Produced	5.1 kWh
Battery	Discharged	9.8 kWh
Grid	Imported	0 kWh

Upgrade Options: It appears your turbine is under-performing. Check our upgrade options.



BATTERY STATUS

9:41

Microgrid Status

Search for Equipment

Great job! Your systems are running on 100% renewable energy - keep it up!

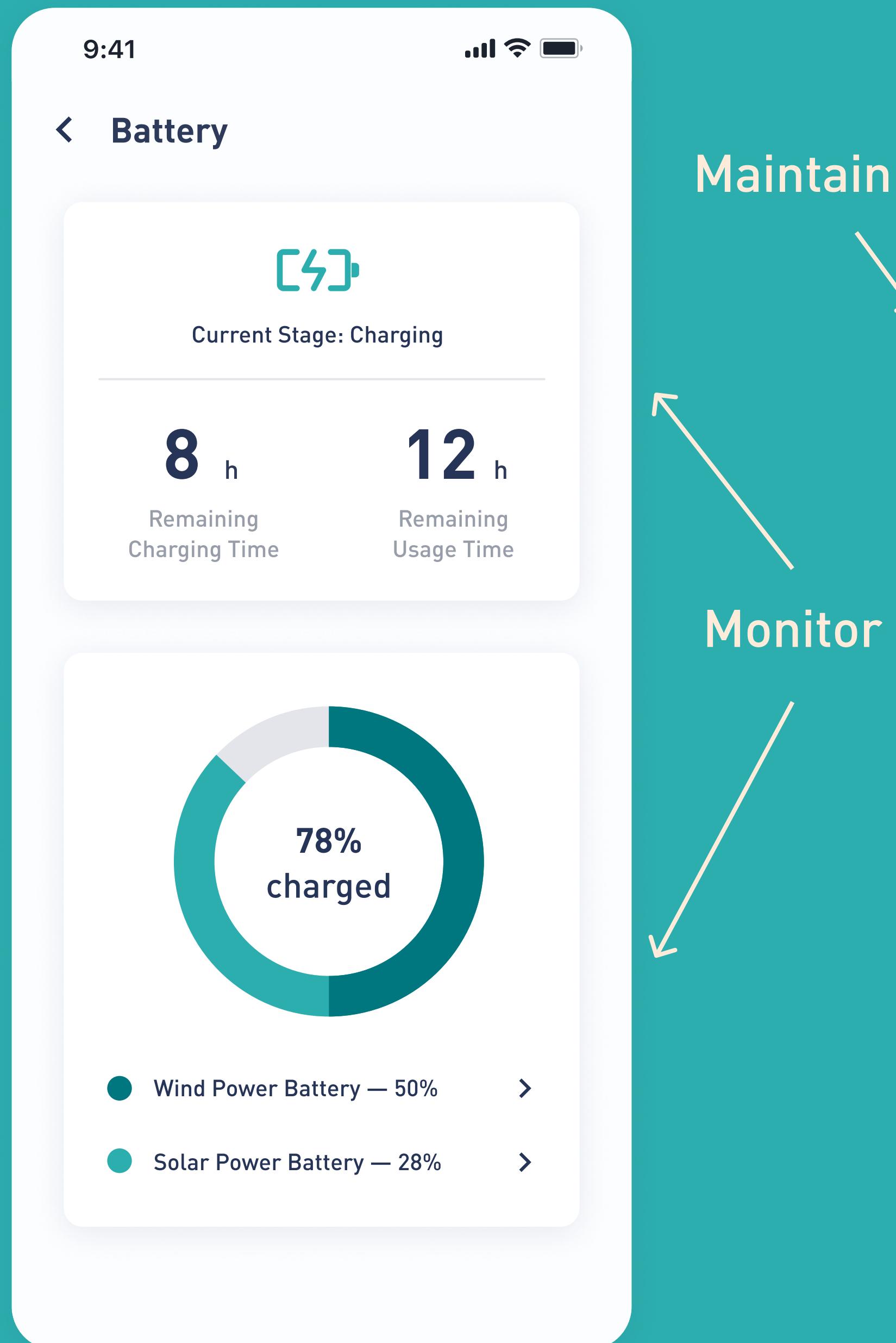
19 kWh Produced

5.1 kWh Produced

9.8 kWh Discharged

0 kWh Imported

This screen displays the Microgrid Status. It shows energy production from wind (5.1 kWh) and solar (19 kWh), and energy consumed by a battery (9.8 kWh). A message at the top encourages maintaining 100% renewable energy.

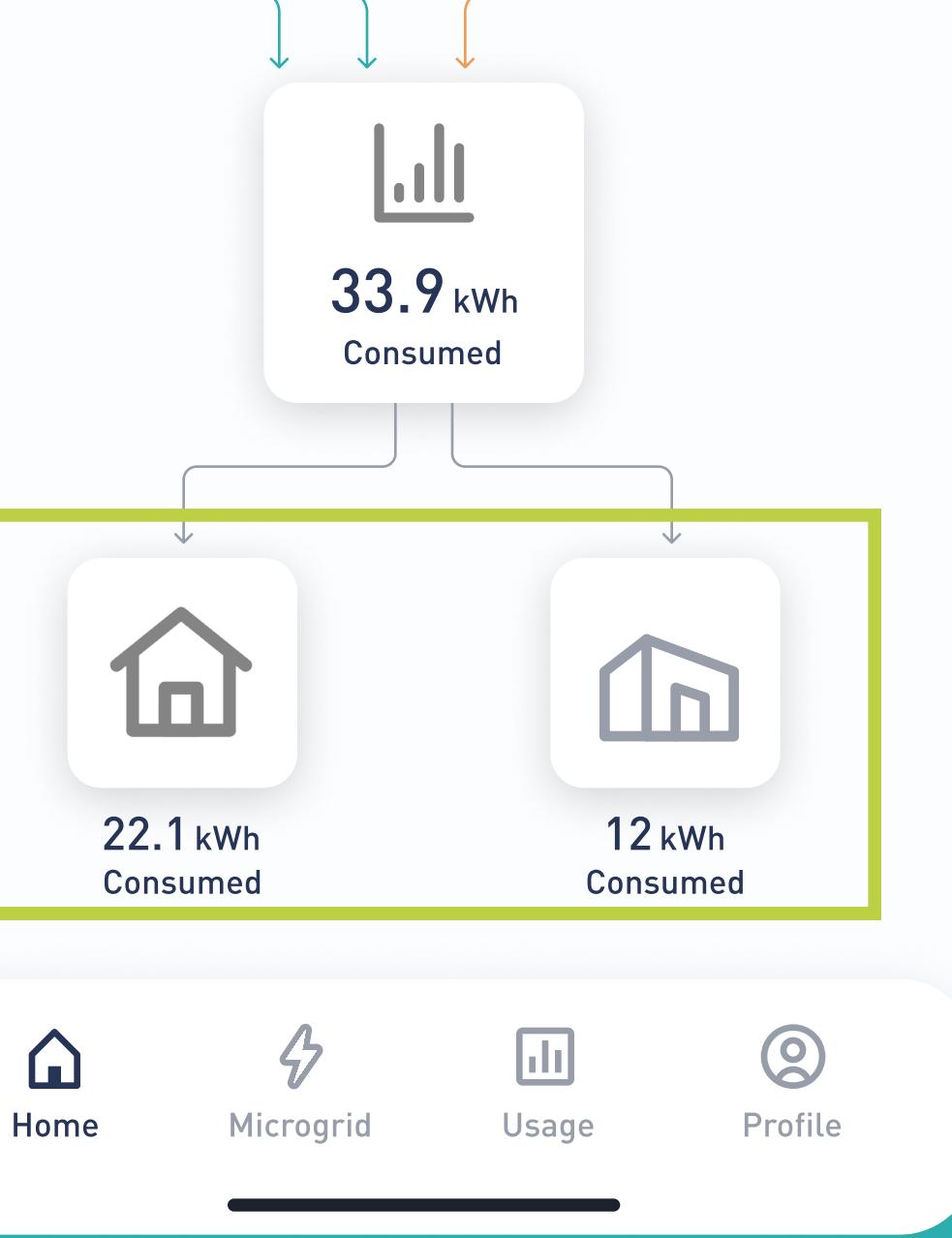


9:41

Wind Power Battery

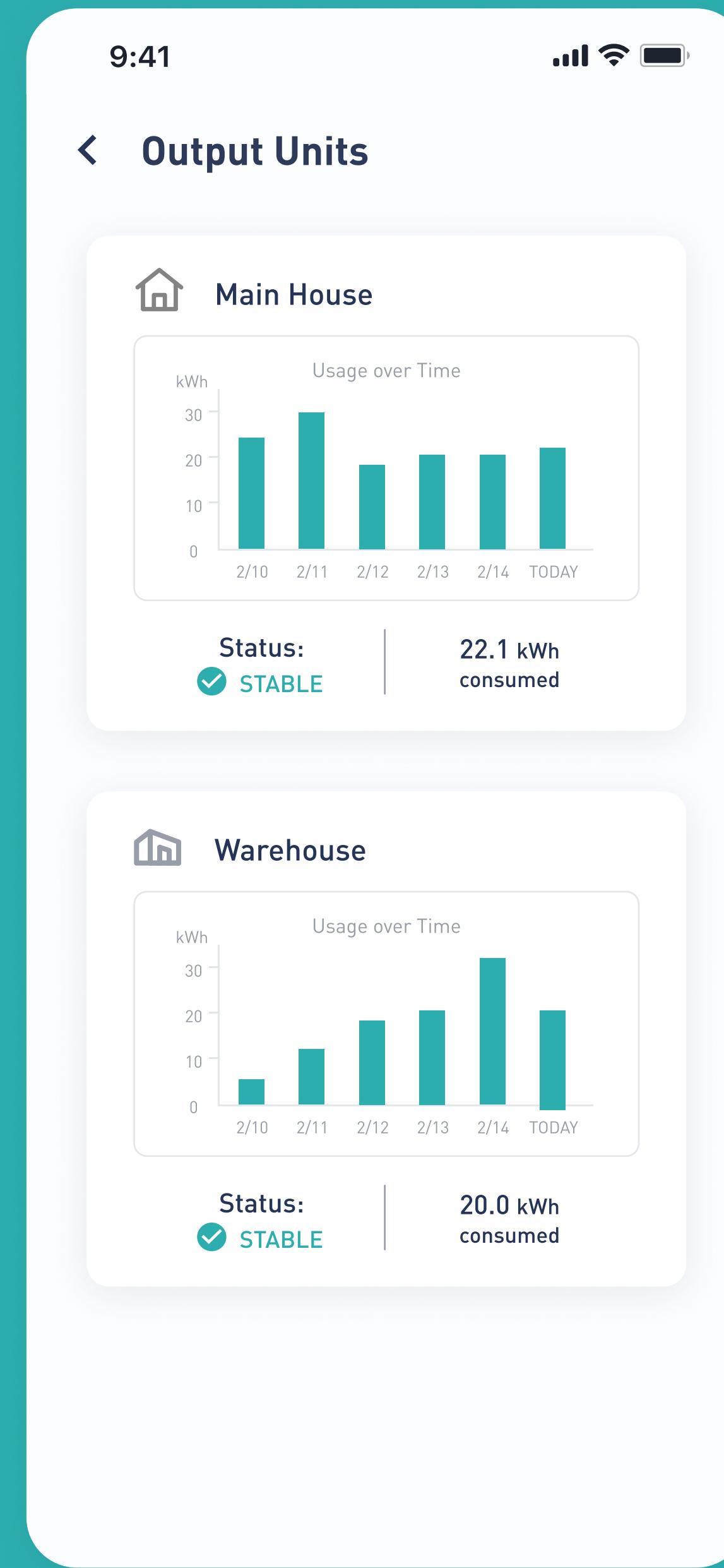
	Equipment 01	80% charged	<input checked="" type="checkbox"/>
	Equipment 02	80% charged	<input checked="" type="checkbox"/>
	Equipment 03	20% charged	<input type="checkbox"/>
	Equipment 04	0% charged	<input type="checkbox"/>
	Equipment 05	0% charged	<input type="checkbox"/>

This screen lists five pieces of equipment under "Wind Power Battery". Equipment 01 and 02 are at 80% charge and have their maintenance switches turned on. Equipment 03 is at 20% charge and its switch is off. Equipment 04 and 05 are at 0% charge and their switches are also off. The word "Monitor" is written vertically on the left side of the screen, with an arrow pointing towards the bottom left corner.



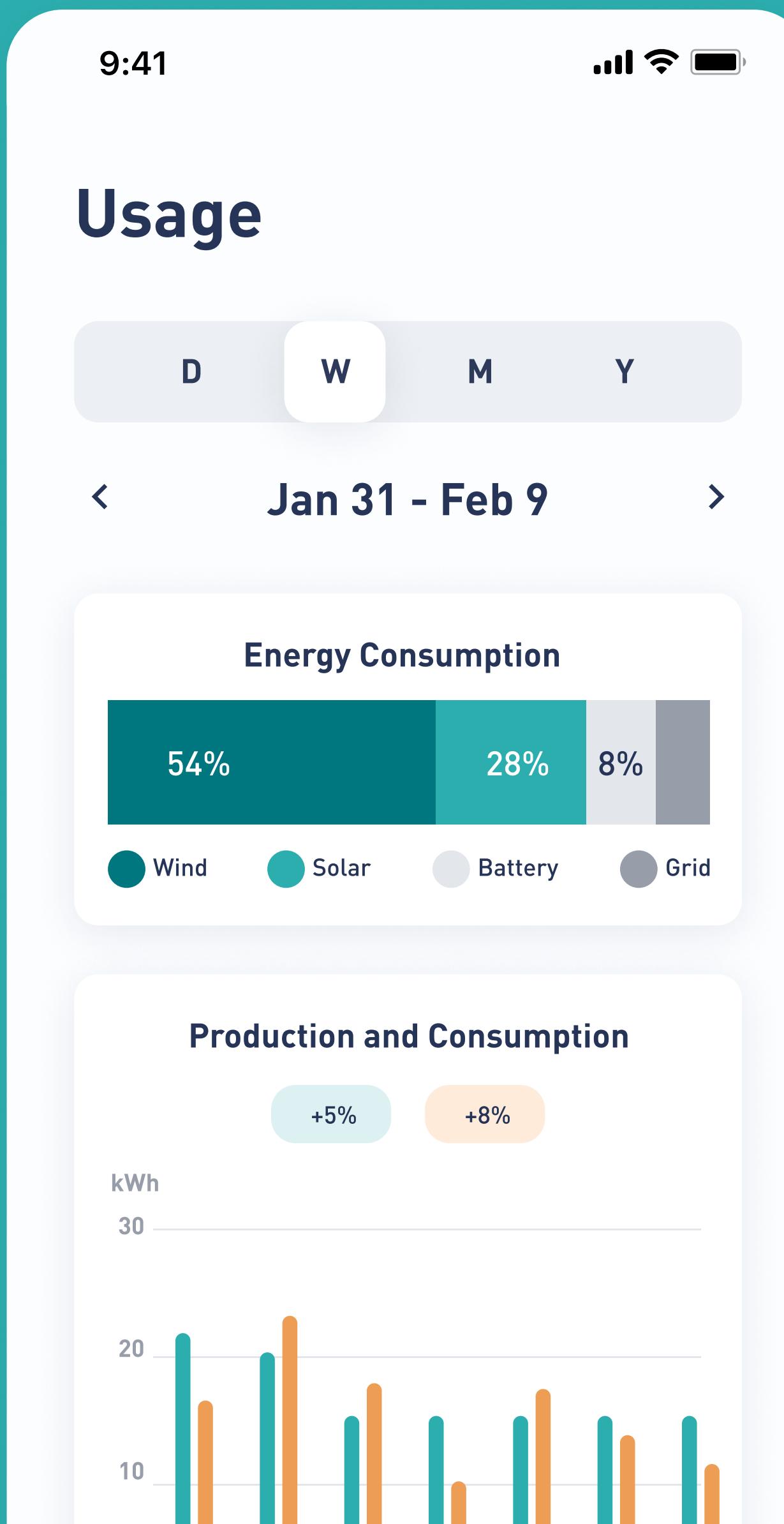
Monitor →

OUTPUT UNITS



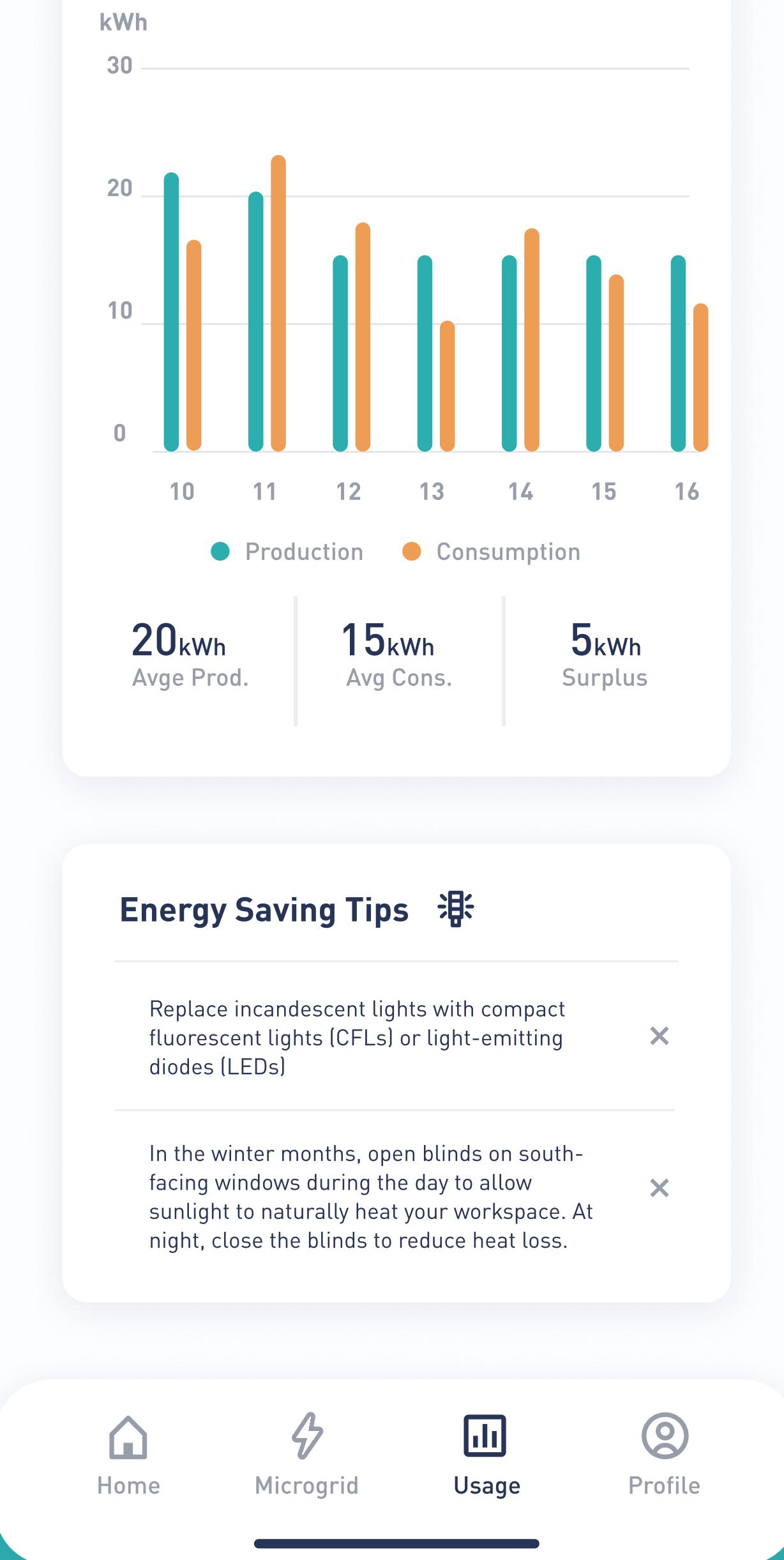
DESIGN BRIEF

Usage



Monitor

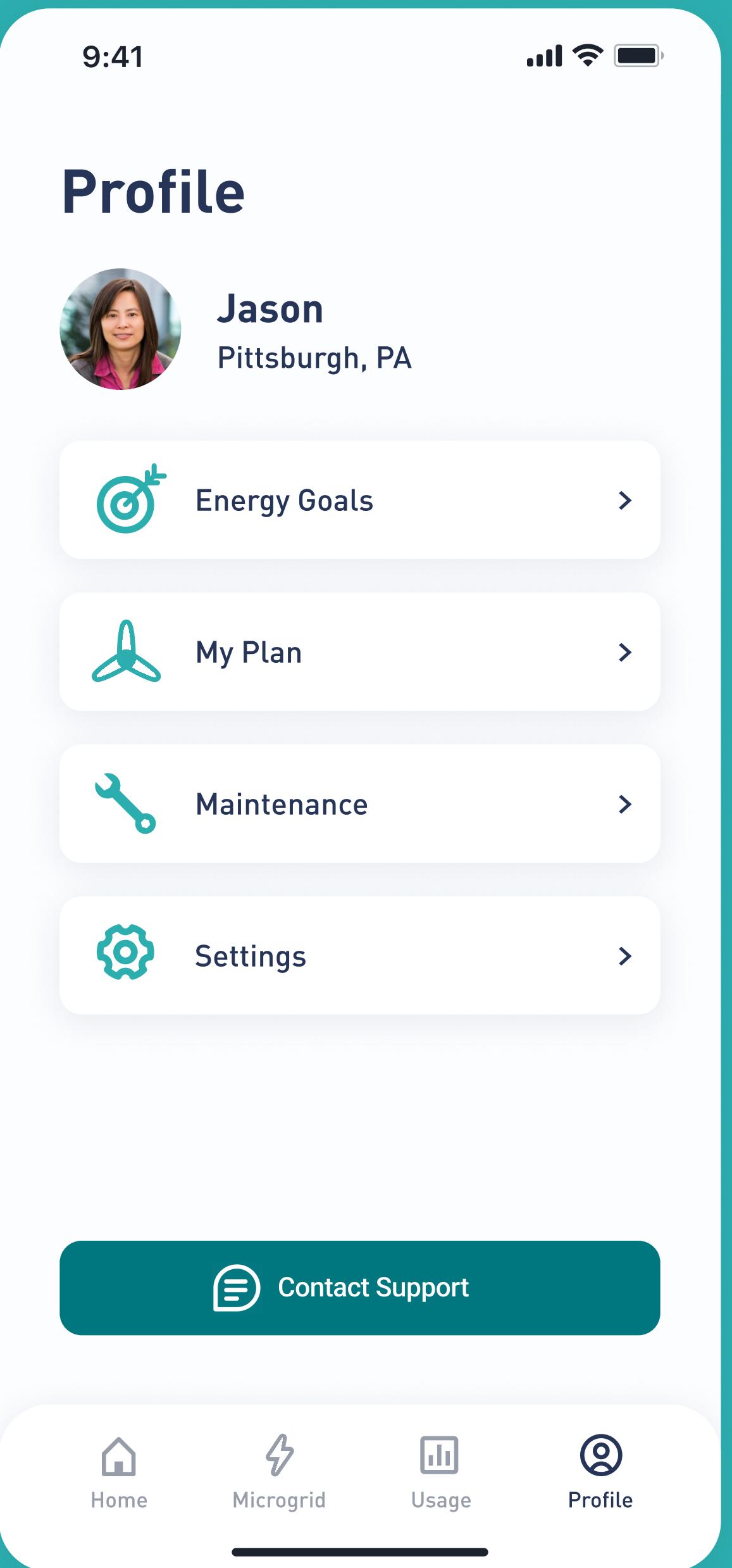
Modify



DESIGN BRIEF

Profile

PROFILE PAGE



ENERGY GOALS

9:41

●●● ●●●

< Energy Goals

Your Current Goals

 Reduce grid energy usage 10% 

 Reduce energy consumption 10% 

Completed Goals

Add Goals

Select additional goals so we can recommend tips to help you achieve them





MY PLAN & MAINTENANCE

9:41

My Plan

WindStax Microgrid System

Overview

3 WindStax 20 Turbines
5 Battery Cells
8 Solar Panels

Services

- ✓ 24 hour monitoring services
- ✓ 48 hour maintenance guarantee
- ✓ WindStax dashboard

Installation Date: 4 February 2022
Model Number: Stax20
Serial Number: 2123nfapl3ABH87

Learn about upgrades

9:41

Maintenance

Request Maintenance Appointment

Upcoming Appointment

Model Number: Stax20
Serial Number: 2123nfapl3ABH87
Problem: The turbine was not working and we fixed the engine to make it work.

4 February 2022

Model Number: Stax20
Serial Number: 2123nfapl3ABH87
Problem: The turbine was not working and we fixed the engine to make it work.

4 February 2022

Model Number: Stax20
Serial Number: 2123nfapl3ABH87
Problem: The turbine was not working and we fixed the engine to make it work.

Value to WindStax

**GridControl provides a unique service
to WindStax customers to help them
reach their goals**

Value to WindStax

1. Maintain Your Systems
2. Monitor Your Use
3. Modify Your Behaviors

Thanks!

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