savant

FILE NAME Energy_Monitoring_Android_Tablet_v2.0

EDITED ON Fri Jun 06 2014
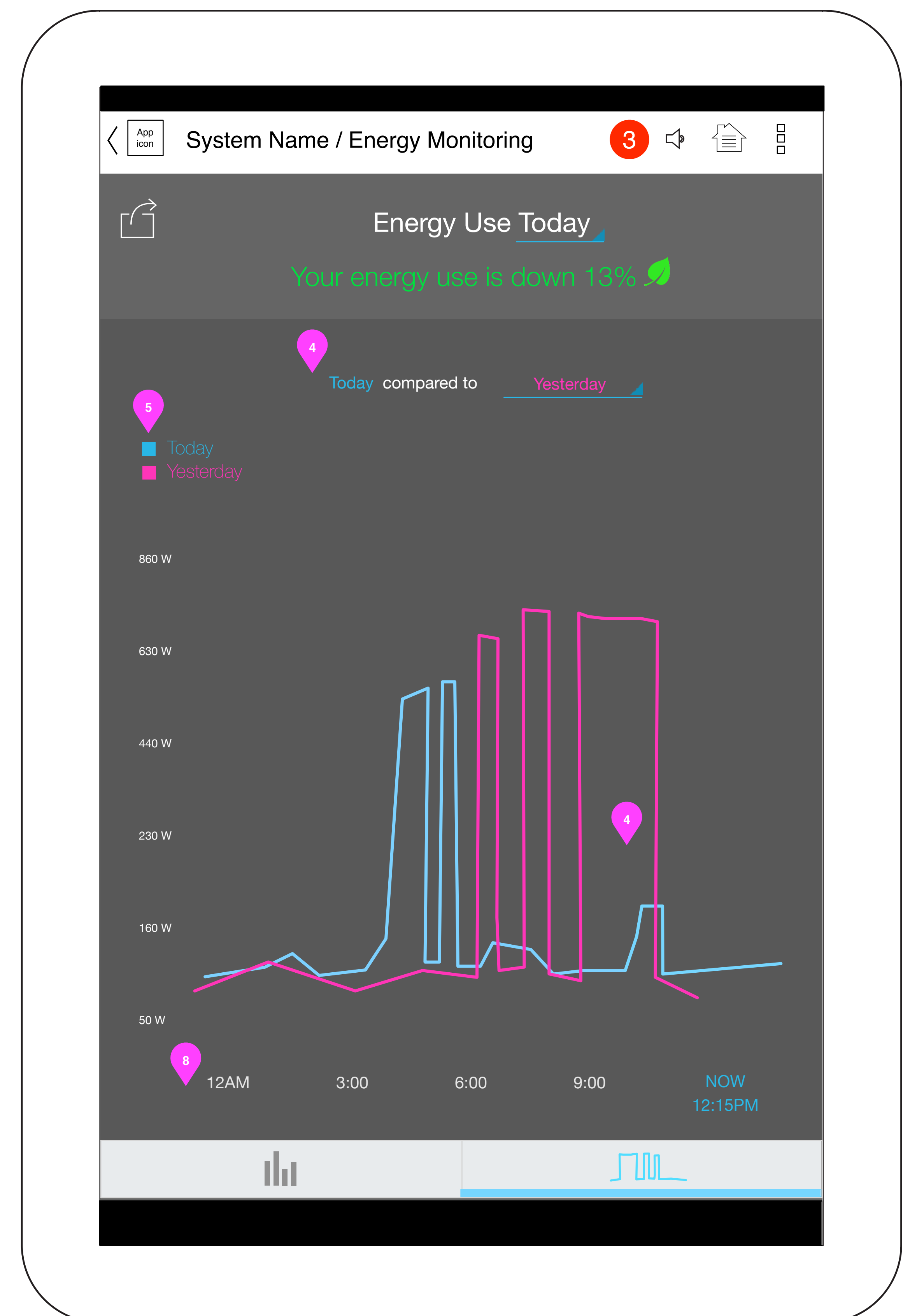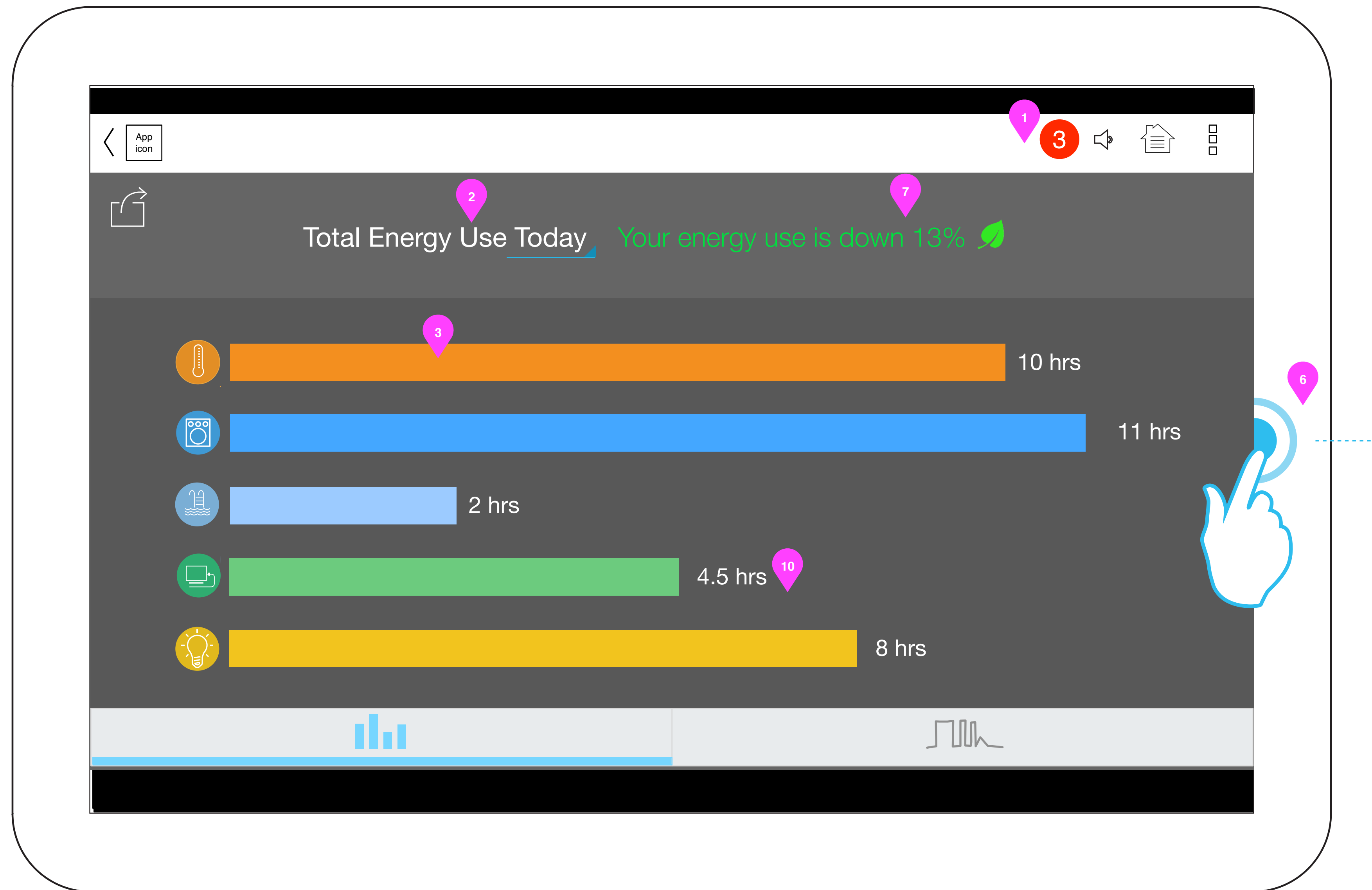
Energy Monitoring

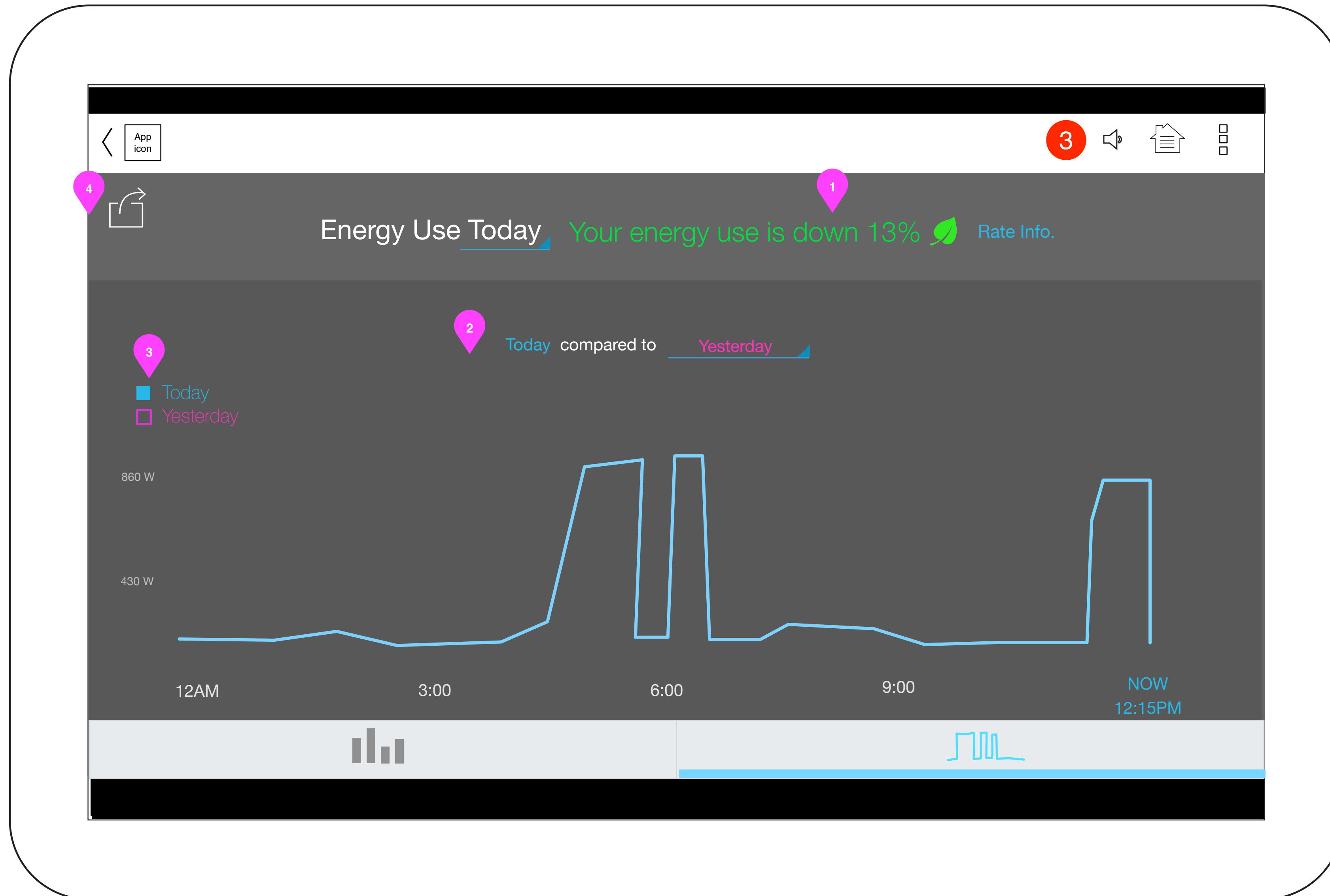|			
Thurs. June 6, 2014	2.0	Dean Wong	Updating UI and flows per Andy, and removing all the Energy Fitness stuff from Phase 1

Energy Monitoring

Total Energy Use Today   Your energy use is down 13%

10 hrs

11 hrs

2 hrs

4.5 hrs

8 hrs

System Name / Energy Monitoring

Energy Use Today

Your energy use is down 13%

Today compared to   Yesterday

Today
Yesterday

860 W

630 W

440 W

230 W

160 W

50 W

12AM   3:00   6:00   9:00   NOW
12:15PM

Monitoring in a "Today" state. Users can swap between a bar chart or line graph view by swiping or tabbing.

1. Notifications will be a global badge indicating new notifications and can be accessed here. Tapping the badge will bring the user to the notifications page.
2. "Energy Use" shown in a "Now" state will preface the time scoped: Today, This Week, This Month, This Year
3. The bar chart allows for a breakdown of total consumption to the time scoped above. The items in the chart are defined within the configuration / blueprint. Icons for popular groups must be applied in blueprint. The interactions in this chart are defined further within this document.
4. When Today: Single day picker, with 'Yesterday' at top
   When This Week: Week picker with 'Last Week' at top
   When This Month: Month picker with '<Name of Last Month> at top
   When This Year: Year picker <Years>
5. Toggles off and on the history chart data for the compared time. Toggled on = Solid-fill, color-coded; Off = Stroked box.
6. Swipe right or left to view the bar chart or the line graph. Tab state toggles on/off to aid the user's orientation.
7. Message that indicates where the user is trending or compared to against different dates.
8. While viewing 'Day' it will be indicated to the user the current time. The time scale up to the current time for the day will always fill the width of this area.
9. This energy scale will be dynamic and indicate 15% above the max value, and the midpoint to that number from zero.

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Energy Use Today Your energy use is down 13% 🍃 Rate Info.

1

2 Today compared to Yesterday

3 ☐ Today
☐ Yesterday

860 W

430 W

12AM 3:00 6:00 9:00 NOW 12:15PM

4

System Name / Energy Monitoring

Energy Use Today

Your energy use is down 13% 🍃

10 hrs

11 hrs

2 hrs

4.5 hrs

8 hrs

5

Kitchen Overhead   1.5 hrs.
Family Room   2.5 hrs.
Master Bedroom   2.0 hrs.
Bedroom 1   1.5 hrs.
Bathroom 1   0.25 hrs.
Living Room   0.25 hrs.

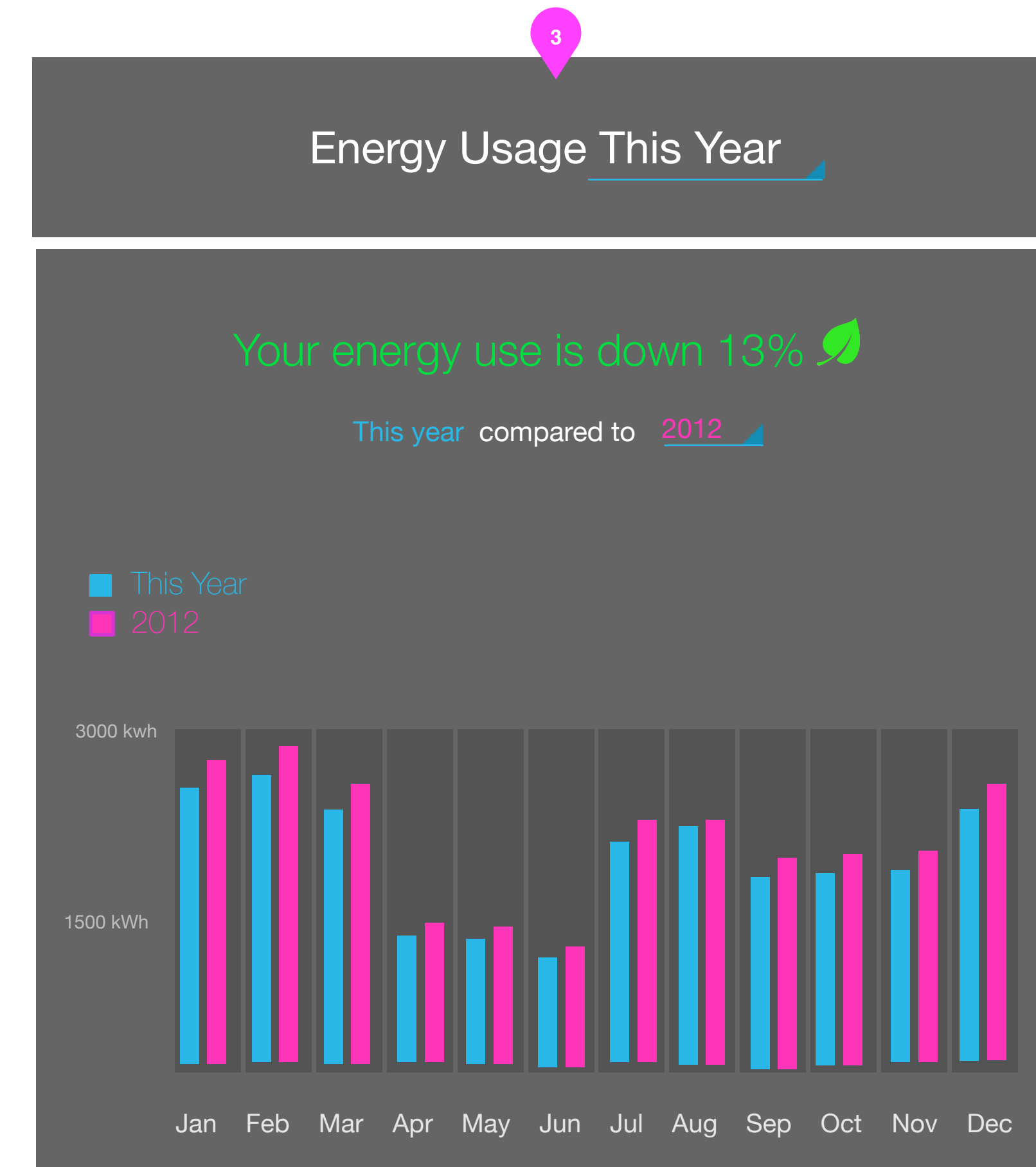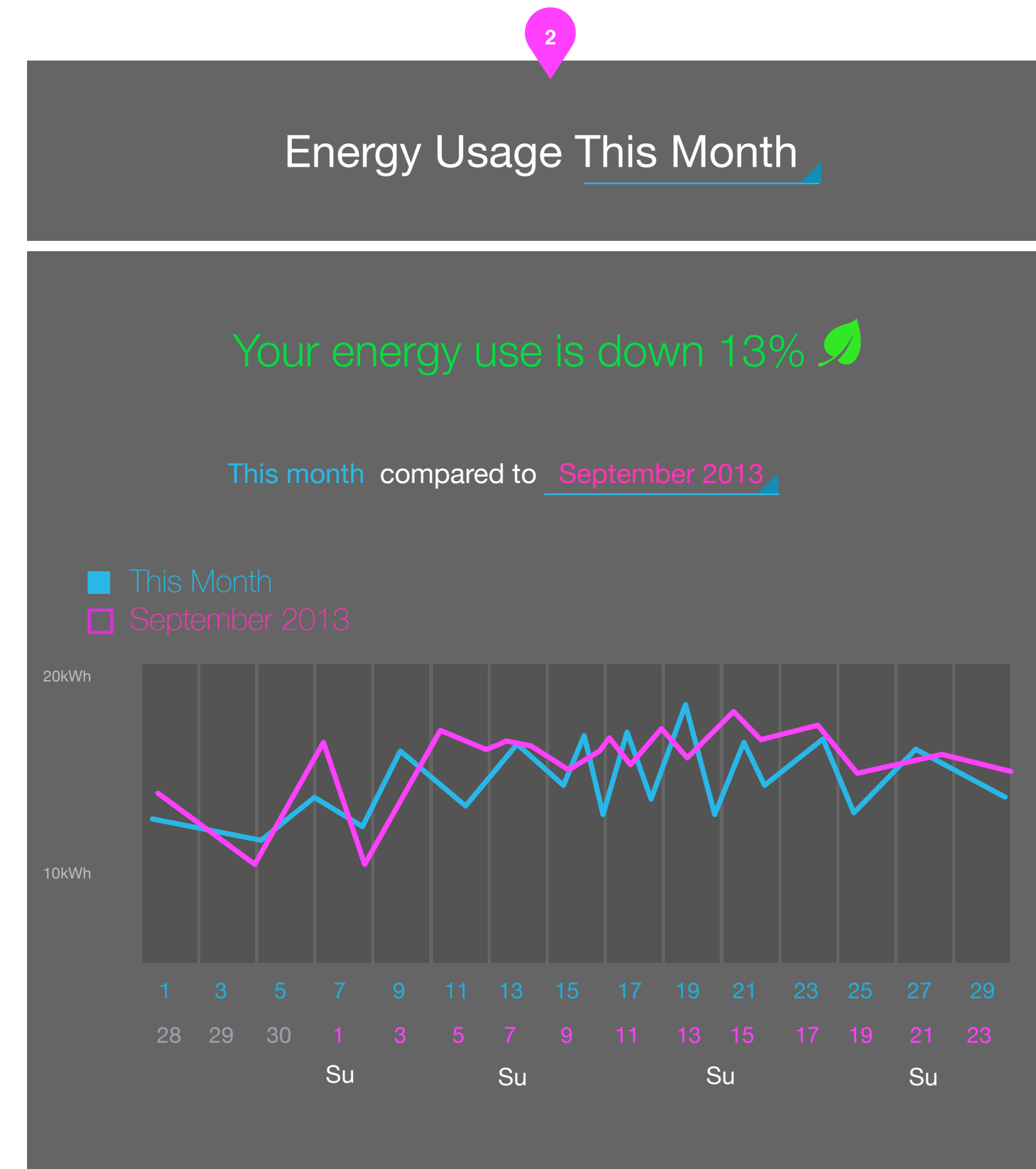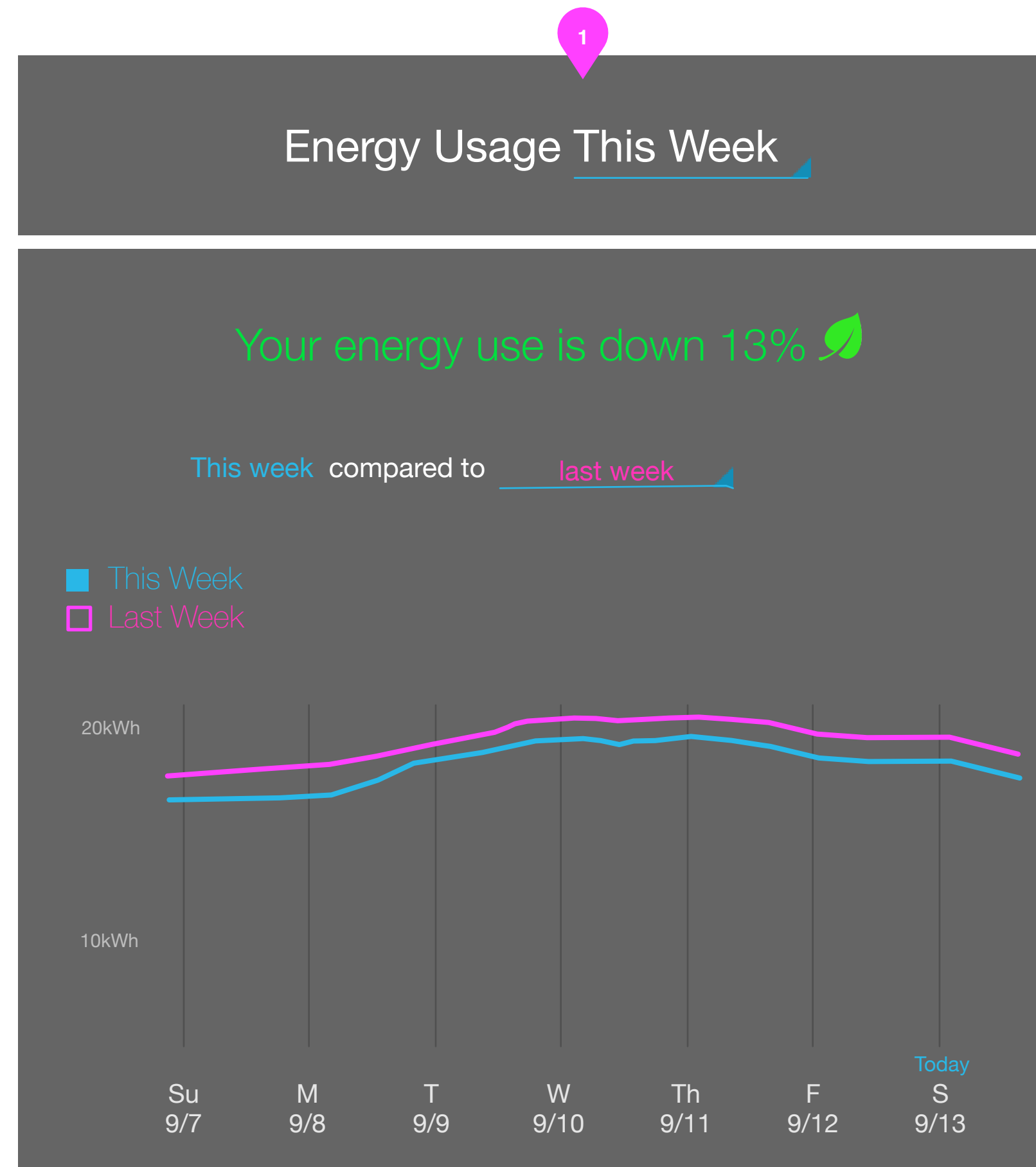1. "Energy Use" shown in a "Now" state for
2. Historical comparison selector.
3. Filtering to toggle on (solid fill) or off (outlined stroke) the corresponding line graph for that time designation.
4. Affordance to add this to a "dashboard" view as a widget.
5. Usage in layman's nomenclature (i.e. hours vs. kWH), and the ability to show more granular detail in-line about a particular service usage.

Energy Monitoring
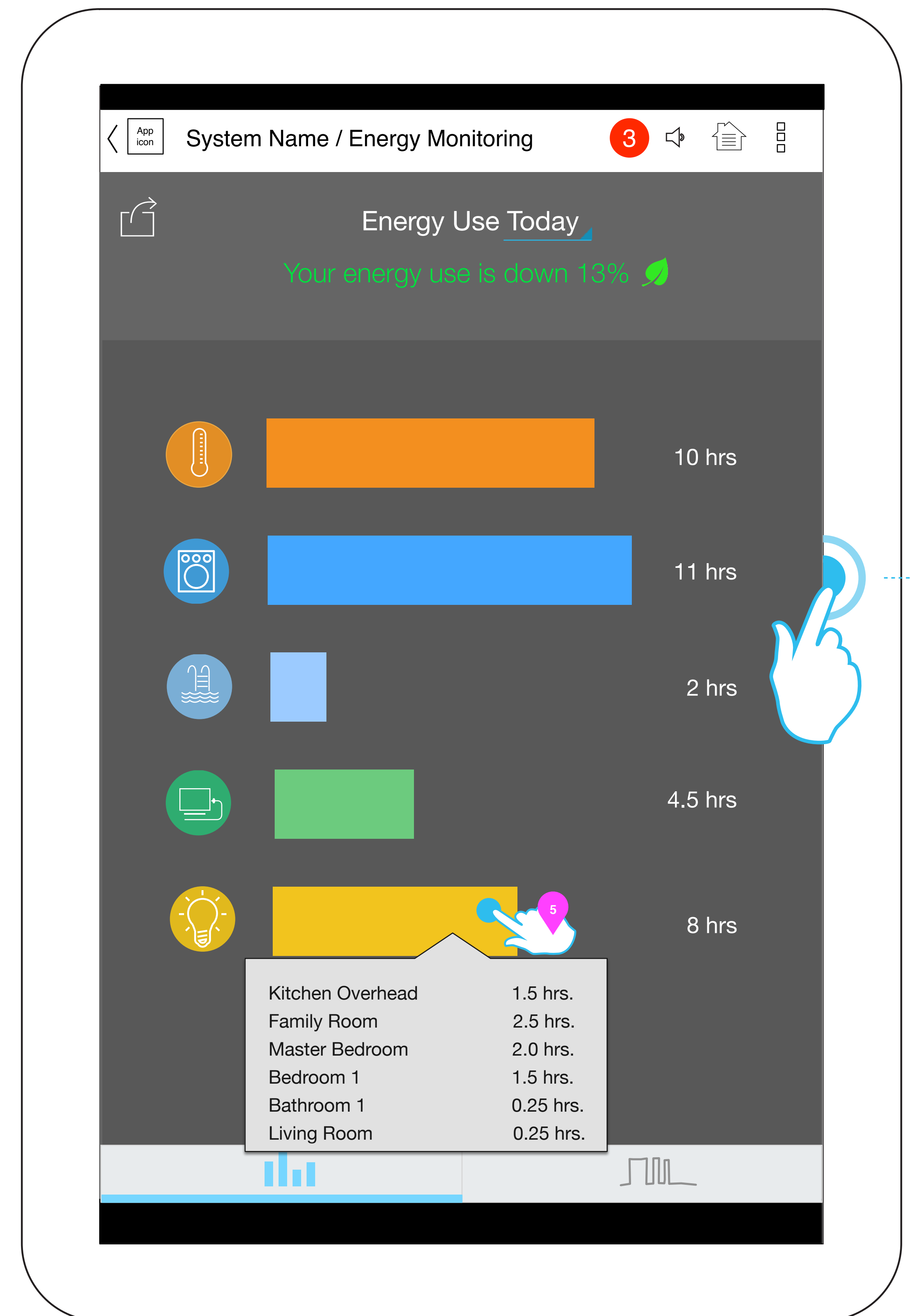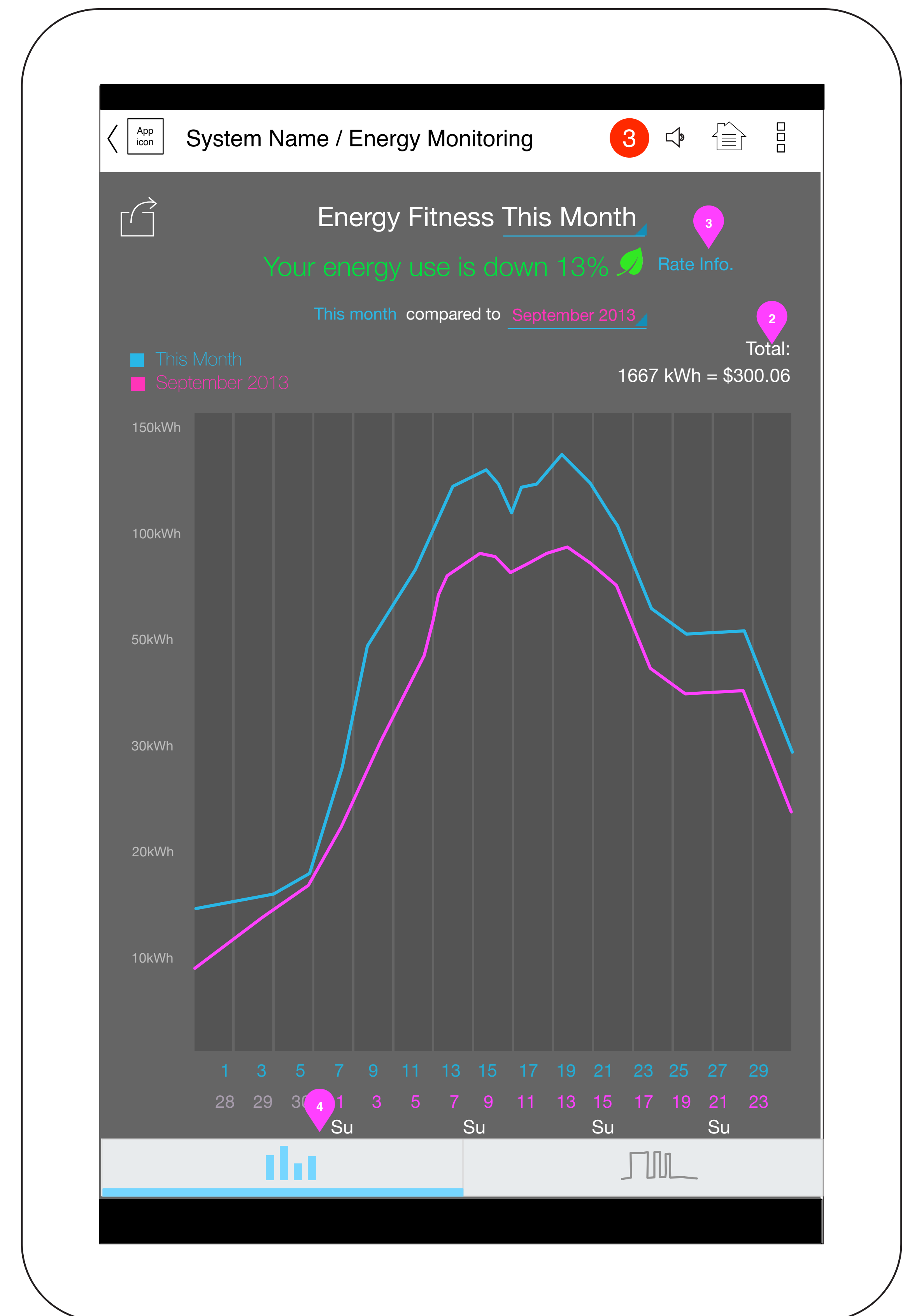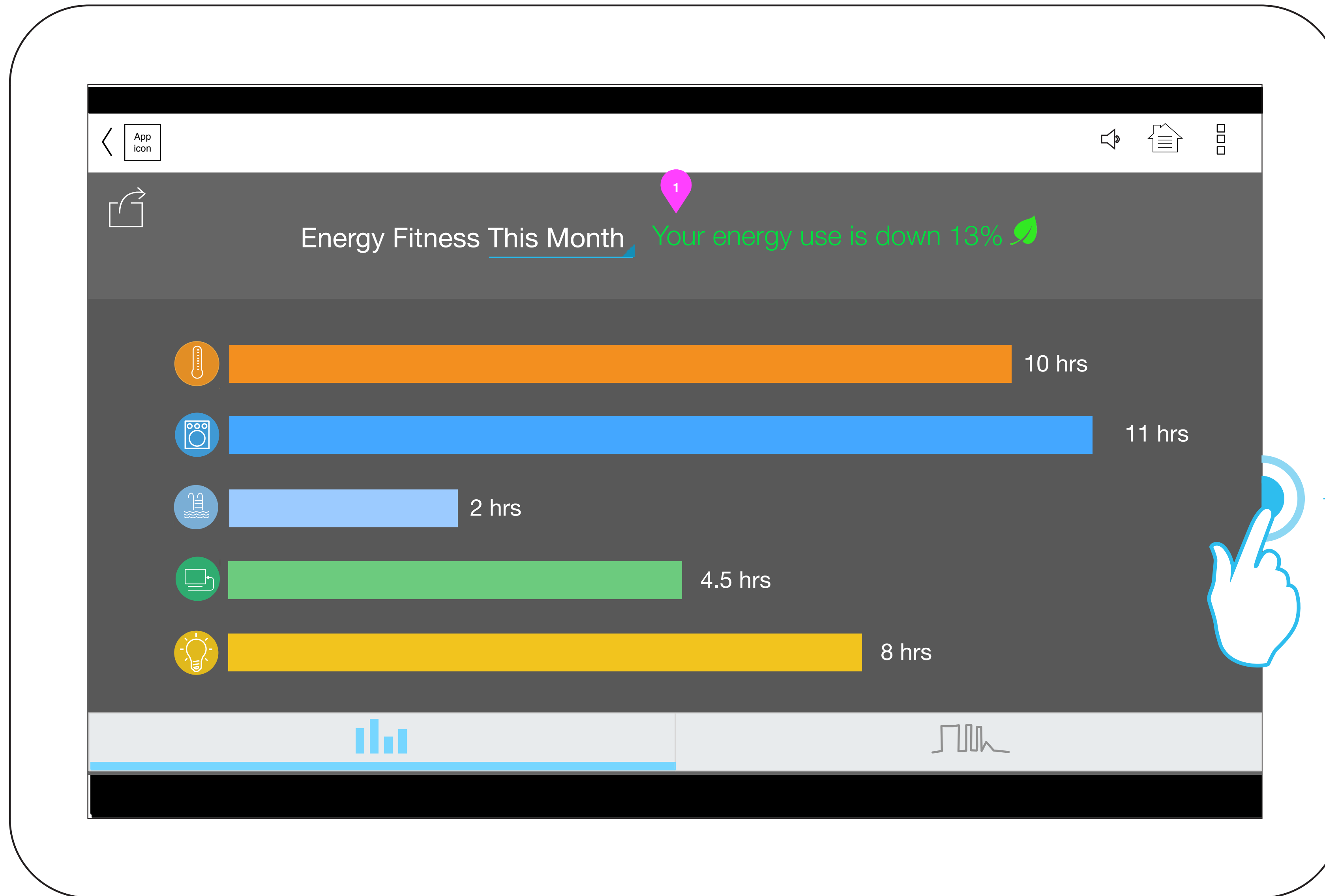
Usage over the course of a month. The user has selected 'This Month', which adjusts the filtered view.

1, Leaf icon is a positive indicator for the comparison being drawn by the filter settings.

2. The line graph comparison would give a tangible conversion, in this case $$$ against kWH. In this line graph, there should be efforts to "smooth" the visualization of data so that it's easliy understandable at-a-glance (In fact, the understanding is that the usage data in reality is actually more volatile/spikes quite a bit within a given time range like a week) The rate information will have to have been entered in Energy Monitoring Settings for this to appear.

3. Users can view their rate info. via a popup or, if the user hasn't entered it there's an affordance to do so here.

5. The timescale is adjusted to indicate days. Each Sunday (this month) is represented and weekends (Sunday to Sunday) should always be aligned by default to show the comparison in equal units of measure. Since weekends are typically where usage goes up.

Energy Usage This Week

Your energy use is down 13% 🌿

This week compared to last week

■ This Week
□ Last Week

20kWh

10kWh

| Su 9/7 | M 9/8 | T 9/9 | W 9/10 | Th 9/11 | F 9/12 | S 9/13 | Today |

Energy Usage This Month

Your energy use is down 13% 🌿

This month compared to September 2013

■ This Month
□ September 2013

20kWh

10kWh

| 1 | 3 | 5 | 7 | 9 | 11 | 13 | 15 | 17 | 19 | 21 | 23 | 25 | 27 | 29 |
| 28 | 29 | 30 | 1 | 3 | 5 | 7 | 9 | 11 | 13 | 15 | 17 | 19 | 21 | 23 |

Su   Su   Su   Su

Energy Usage This Year

Your energy use is down 13% 🌿

This year compared to 2012

■ This Year
■ 2012

3000 kwh

1500 kWh

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

If not comparing this time to the immediately previous time{

This month compared to September 2013

You used **15%** less

You used **15%** more

If comparing this time to the immediately previous time{

This week compared to last week
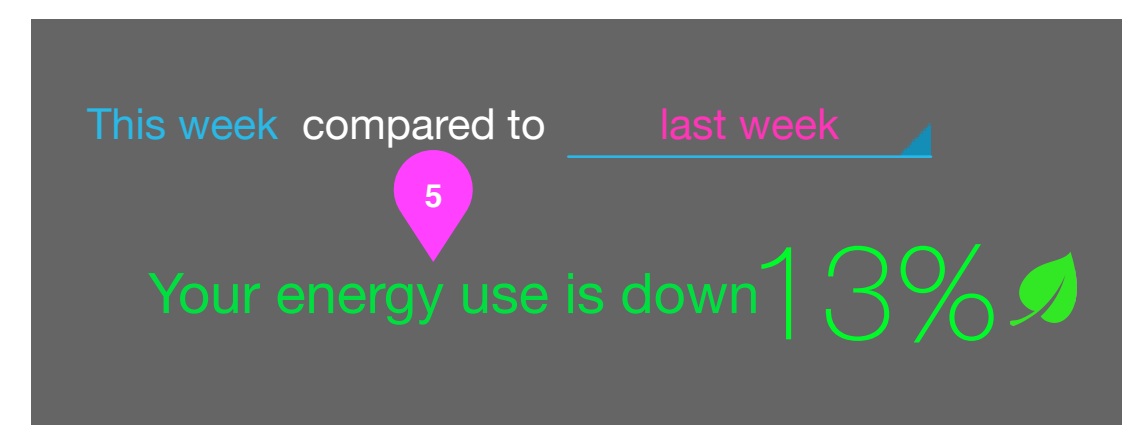
Your energy use is down **13%** 🌿

Your energy use is up **13%**

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1. In the Week view the chart should show the days and dates and Today. There should be some resolution to the energy use through days but it shouldn't attempt to apply all data points. Instead, the user should be able to obtain a 10k view of usage peaks and valleys for the week overall.

2. Energy Usage This Month indicates the total for energy use for each day. Again, the weekends should align by default Sunday to Sunday to best illustrate a direct 1:1 comparison.

3. Energy Usage This Year indicates the total for energy use for each month.

   Nomenclature and colors for trending

4. When the compared time is not immediately previous to the current time, The nomenclature is 'You used X % compared to…'

5. When the compared time is not immediately previous to the current time, The nomenclature is 'You are trending, with arrows indicating whichever direction the trend is going.

   • If energy consumption trends are going up (bad) the color is burnt orange. If going down (good), the color is green.

   • Pinch and zoom to expand the line chart. The panel on the left contracts elegantly towards the left margin but can be re-displayed as a two-pane view via a handle control.

Energy Monitoring

Screen 1

Today

Your energy use is down 13% 🌿 Compared to yesterday

Today	1.1 kW	$ 1.45
Yesterday	1.6 kW	$ 1.75

12:00AM - 12:15PM

1 Details

860 W

430 W

12AM   3:   6:00   9:00   NOW 12:15PM

2

Screen 2

System Name / Energy Monitoring

Today

Your energy use is down 13% 🌿

Compared to yesterday   12:00AM - 12:15PM   Details

Today	1.1 kW	$ 1.45
Yesterday	1.6 kW	$ 1.75

860 W

430 W

12AM   3:00   6:00   9:00   NOW 12:15PM
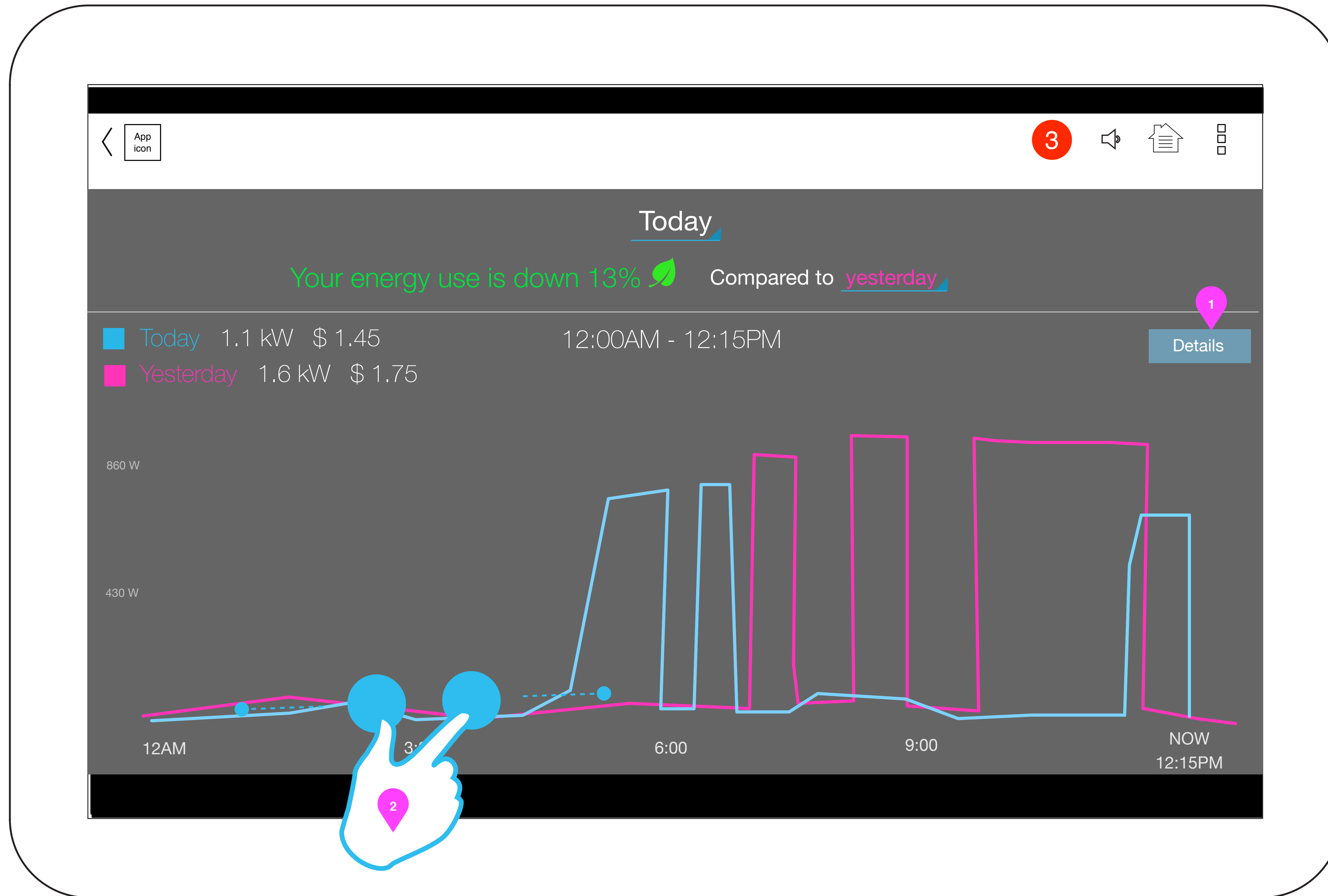
A today view that shows two points in time as an overlay.

1. Details button opens a modal view to see usage by device.
2. Pinch and zoom to expand the line chart.

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Energy Monitoring
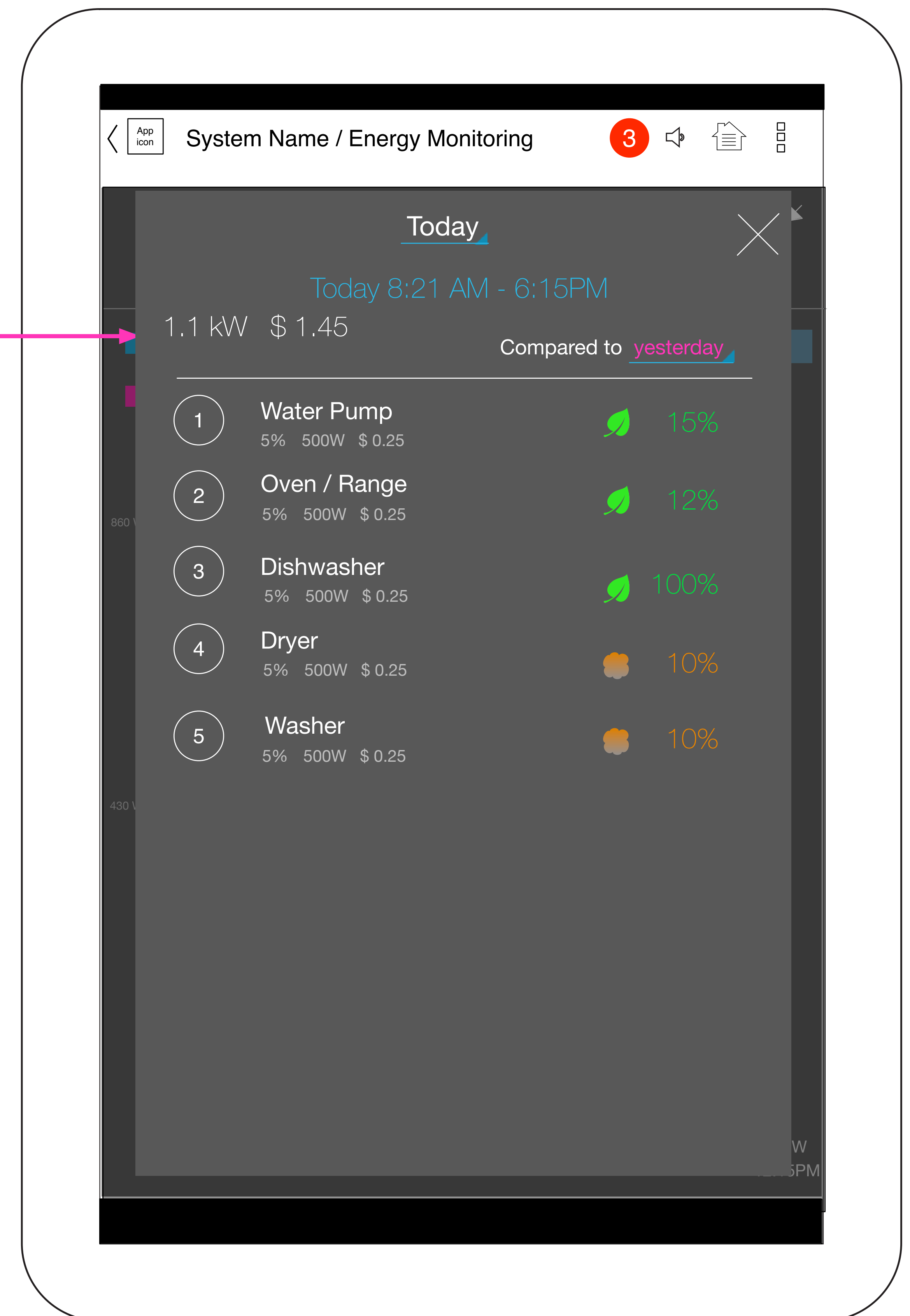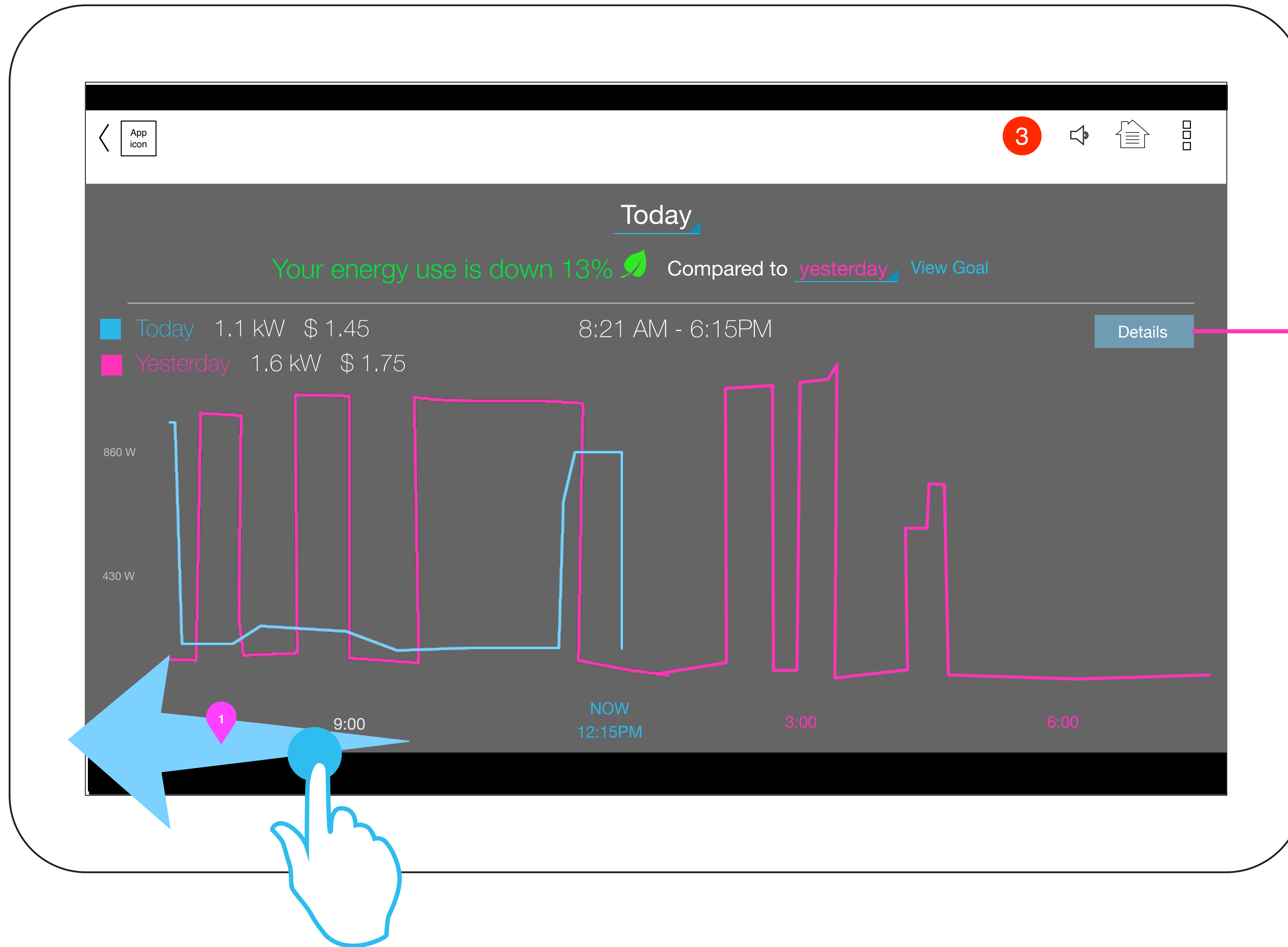
Navigating within time is done via a pinch and zoom to expand or contract the given time ranges that the user is interested in historically.

1. Pinch and zoom to expand or contract the line chart to a finer point in time. Swipe left or right horizontally to see an adjacent day or multi-hour block.

2. Clicking "Details" shows a line-item list view in a modal window. Users can see specific appliances' impact on their energy profile/efficiency.

Energy Monitoring

Security

Energy

Lighting

Climate

Entertainment

Appliances

Current | consumption is ○

More Than | 2500 | kW

Monthly | cost is ○

more than | $100

Monthly | production is ○

more than | 2500 | kW

Monthly | carbon footprint ○

is | 25% | above | the

national | average

Savant Energy Notification

10/15/14 3:14AM

Monthly carbon footprint is 25% above the national average.

✔ Continue receiving this notification.

Close | View

Energy Monitoring will trigger Notifications to to end users.

For purposes of clarity these have been broken out as their own feature set so please refer to the Notifications, in Spacely > Graphics > Projects - Notifications #1417, for further details.

Weekly

When would you like to begin?

◉ Today

○ Sunday 10/14/14

Cancel | Begin

Monthly

◉ Today
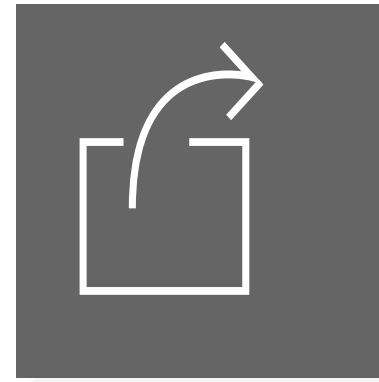
○ November 1 2014

Yearly
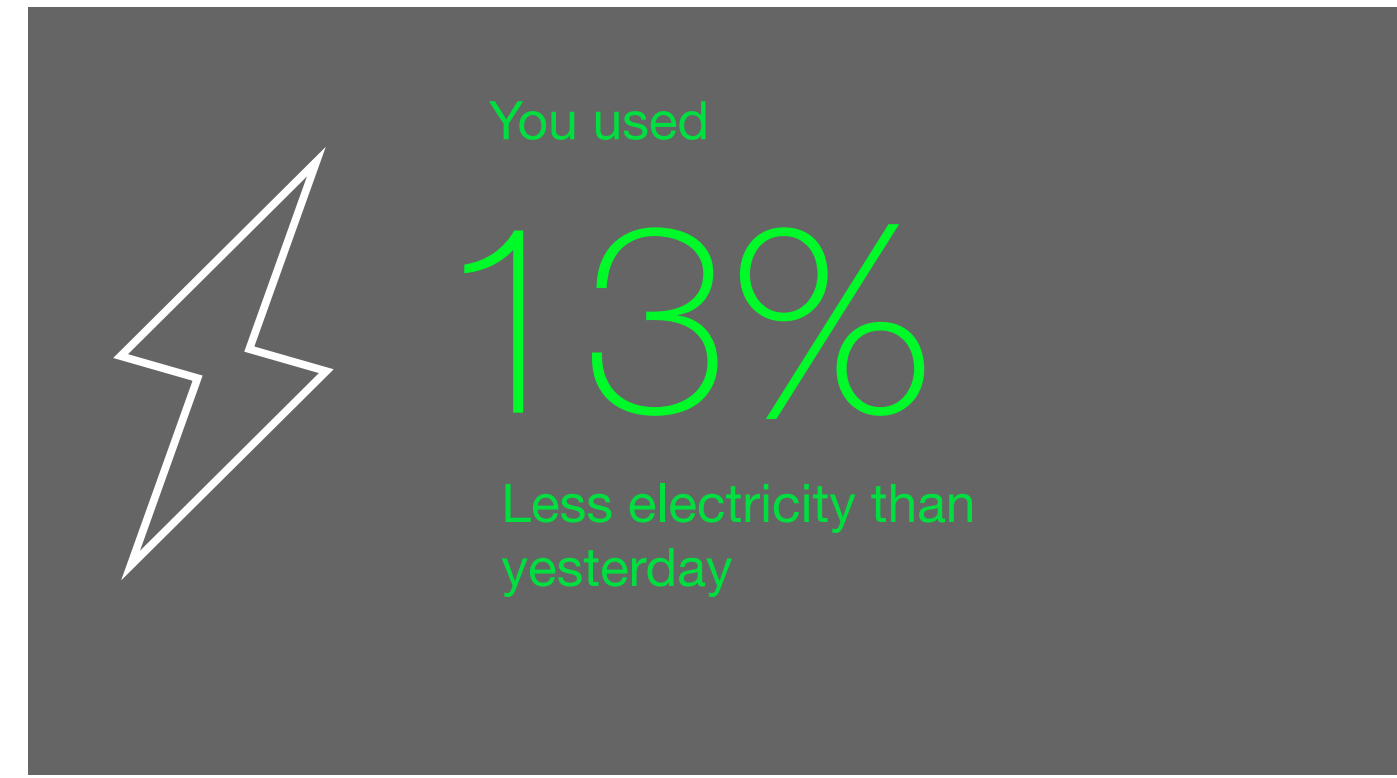
◉ Today

○ January 1 2015

Monthly carbon footprint is 25% above the national average. | ON | ✕

Monthly carbon footprint is 25% above the national average. | › | 10/13/14 7:15AM | ✕

Energy Monitoring

Dashboard Widget

Save As Wake Up Screen

Save Widget To Dashboard

You used
13%
Less electricity than yesterday

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Energy Monitoring

Left screen

‹ | App icon | Notifications | 🔊 | 🏠 | ⋮

3 New Notifications   **Settings**   **+ Create New**

⚡	Energy consumption has exceeded 2.2 kW	›	10/13/14 7:15AM ✕
🔒 ●	Security Alert: Living Room ›	Bypass	10/13/14 2:15AM ✕
📷	Dryer has completed its' cycle.	›	10/12/14 6:15PM ✕
💡	Lights have been turned off	Learn More	10/12/14 6:15PM ✕
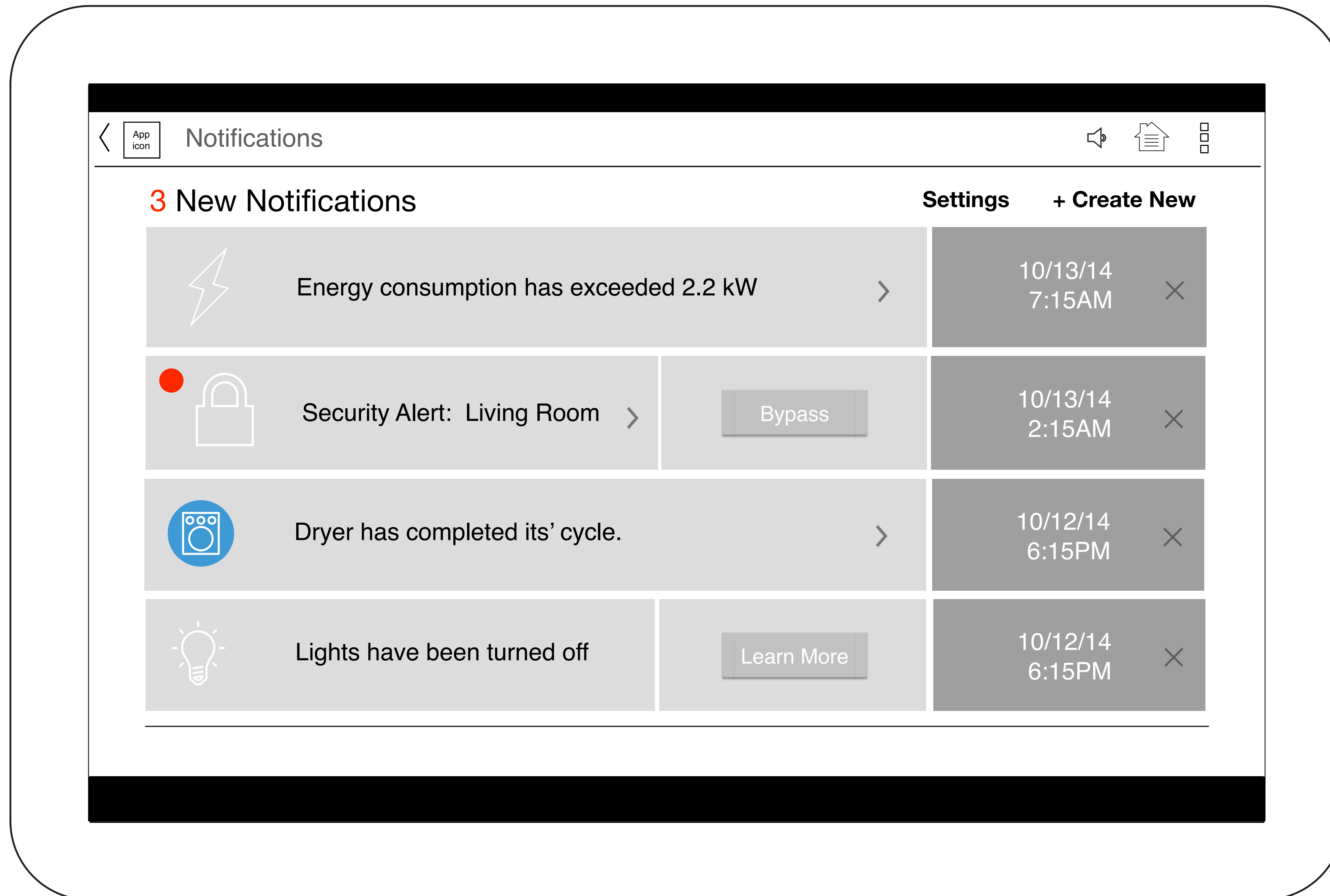
Notifications Center with Energy Monitoring notifications as they might appear there…please refer to Project 1417 in Spacely for the latest wires.

Right screen

« | App icon | System Name / Energy Monitoring | 🔊 | 🏠 | ⊞

3 New Notifications   **Settings**   **+ Create New**

⚡	Energy consumption has exceeded 2.2 kW	›	10/13/14 7:15AM ✕
🔒 ●	Security Alert: Living Room ›	Bypass	10/13/14 7:15AM ✕
📷	Dryer has completed cycle.	›	10/13/14 7:15AM ✕
💡	Lights have been turned off.	Learn More	10/13/14 7:15AM ✕
💡	Lights have been turned off.	Learn More	10/13/14 7:15AM ✕
			10/13/14 :15AM ✕
💡	Lights have been turned off.	Learn More	10/13/14 7:15AM ✕

Energy Monitoring

Settings

App icon

SYSTEM SETTINGS

Users

Notifications **3**

Energy Management

ENTERTAINMENT

Video

Audio

Equalizer

Energy Management Settings

App icon

Energy Management

<Address>

Square footage of your home: 10,000 sq ft.

Rates

<Content explaining peak hours, electricity rates and how to use the table below>.

Time	Energy	Transmission
12:00 AM	$0.04200/kWh	$0.01362/kWh
9:00 AM	$0.04600/kWh	$0.10462/kWh
8:00 PM	$0.04200/kWh	$0.01462/kWh

+

Appliances

Dishwasher

Year	2004
Make	Maytag
Model	
Gallons Per Load	15
Estimated Yearly Operating Cost	$31
Yearly kWh	294
Energy Star	Yes

+ Add Appliance

Create New Report Rule

Energy Report

CANCEL   SAVE

Send A Report To

img **Username**
User Type

EMAIL

username@emailaddress.com ☑

username@emailaddress.com ☐

img **Username**
User Type

EMAIL

username@emailaddress.com ☑

username@emailaddress.com ☐

img **Username**
User Type

EMAIL

username@emailaddress.com ☑

username@emailaddress.com ☐

Including

Energy Consumption ☑

All Circuits or Groups

Estimated Energy Cost ☑

Service Use ☑

Room Use ☑

Average Use

Neighborhood ☑

State ☑

Nationwide ☑

Security Alert History ☑

Status ●

Anywhere

At A Frequency Of

Once A Week

Create Report

Create Notification

1. Selecting the "Create Report" item will launch the "Report Creation" screen. This is where the user will define to whom and what notifications to send.
2. At the top of the screen the user will define the name of the report. The field will repopulate with a unique name.
3. The first column will show a list of users that can receive the notifications. Information pertaining to the user will populate the field. This list scrolls vertically.
4. Emails can be checked or unchecked for each user. This field will send an email to all the addresses checked.
5. At the the top of the list, All check box allows the user to check all the All the email address for each of the users in the list.
6. The second column is a list of all the report options. This list scrolls vertically. Tapping on an item will check or uncheck it. Items that are checked will be included in the emailed report.
7. List of all Circuits or Groups including All.
8. Red
   Yellow
   Green
9. List of all Rooms including All
10. The third column the user picks what the frequencyy this report will be sent out.
11. Week
    Month
    Year