



**Capitalizing on Technology Solutions  
in Affordable Housing**  
**Opportunities to Reap Gains for Residents  
and Building Operations**

# Featured Speakers



*Moderator:* **Davis Park**, Vice President, Front Porch Center for Innovation and Wellbeing



**Tim Kohut**, AIA, Director of Sustainable Design, National Community Renaissance



**David Saunier**, Founder and Partner, Centri Tech



**Chris Burger**, Technology Program Manager, EAH Housing

# Agenda

- I. Welcome and Introduction**
- II. Opportunities to Avoid Unrealized Gains for Building Operations**
- III. Systems-Building Solution: Developer-Owned Technology Infrastructure**
- IV. Enhancing Resident Lives with Greater Technology Access**
- V. Legislative Overview / Policy Updates**
- VI. Audience Questions**



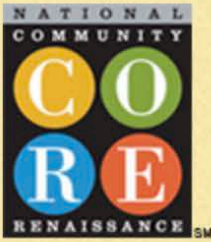
Tim Kohut, AIA  
Director of Sustainable Design,  
National Community Renaissance



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[www.nationalcore.org](http://www.nationalcore.org)





HOME

ABOUT

CORE CONCEPT

NEWS

AWARDS

PORTFOLIO

CONTACT



HOPE through HOUSING®  
FOUNDATION

NATIONAL COMMUNITY RENAISSANCE®

*Together, we transform lives and communities.*



# SUPPORT HOPE THROUGH HOUSING FOUNDATION

[DONATE TODAY](#)



ONE GOAL ONE MISSION.

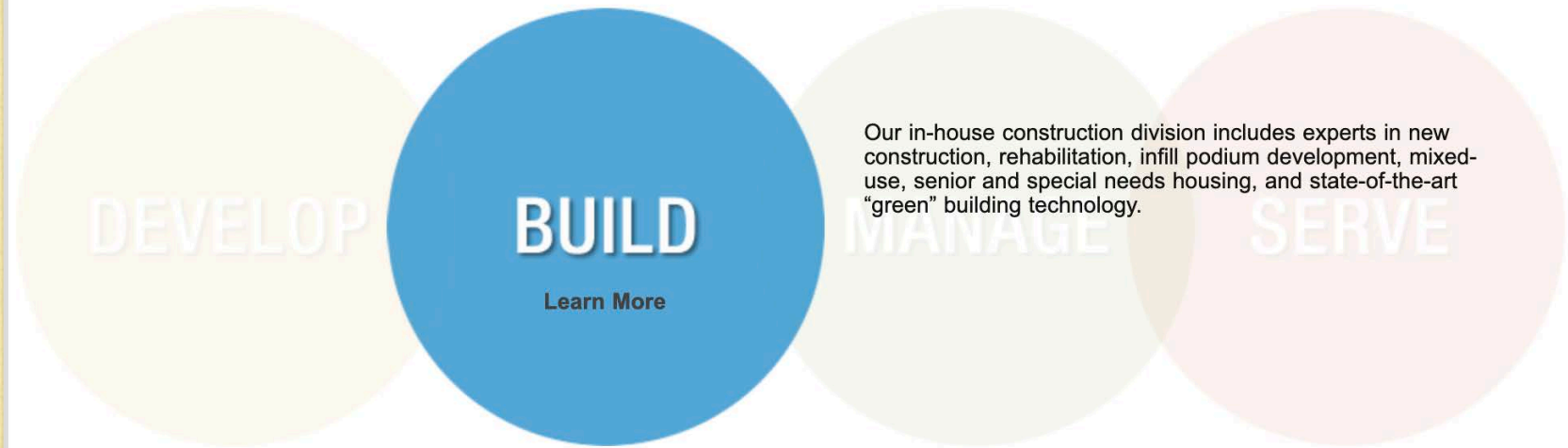
NATIONAL COMMUNITY RENAISSANCE® & HOPE THROUGH HOUSING FOUNDATION

SEARCH

National CORE's unique in-house capabilities ensure the same high-level standards are met at each phase of community development.



National CORE's unique in-house capabilities ensure the same high-level standards are met at each phase of community development.





National CORE's unique in-house capabilities ensure the same high-level standards are met at each phase of community development.

National CORE's full service property management division trains and manages on-site staff to make sure that resident and community needs are met.

DEVELOP

[Learn More](#)

BUILD

[Learn More](#)

MANAGE

[Learn More](#)

SERVE

National CORE's unique in-house capabilities ensure the same high-level standards are met at each phase of community development.

Through measurable outcomes, our Hope through Housing Foundation ensures residents have access to services that improve their lives and transform their communities.

DEVELOP

BUILD

MANAGE

SERVE

[Learn More](#)

## Our Commitment to Sustainability...

### **National CORE awarded Power Builder distinction by U.S. Green Building Council's 2018 LEED Homes Awards**

Jun 20, 2019

Annual awards honor prominent projects, developers, and builders in residential sustainability Rancho Cucamonga, Calif. – June 20, 2019 – National Community Renaissance (National CORE) has been named a Power Builder by the U.S. Green Building Council (USGBC) as a part...

[read more](#)

### **National Community Renaissance becomes first developer to sign onto AIA's 2030 Commitment**

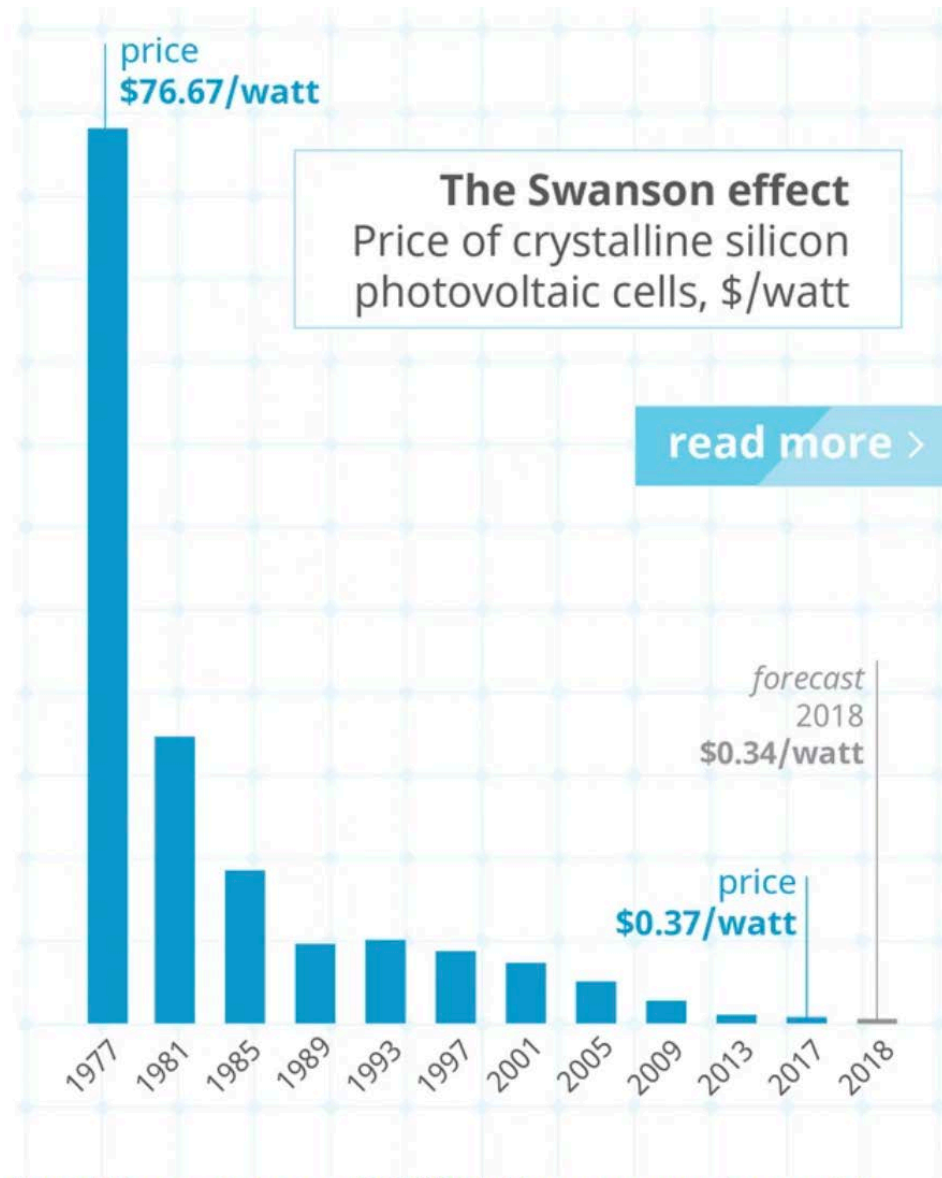
Apr 16, 2019

WASHINGTON – April 16, 2019 – The American Institute of Architects (AIA) is welcoming National Community Renaissance (National CORE), one of the nation's largest nonprofit developers of affordable housing, as the first developer to sign the AIA 2030 Commitment. AIA's...

[read more](#)



# Energy Efficiency + Renewables – Why is this important now?



<https://cleantechnica.com/2014/02/04/current-cost-solar-panels/>

## The Dropping Cost of PV

1. These are real savings
2. We see this playing out on every project.
3. Affordable housing developers must take advantage of this (there is too much at stake not to)
4. National CORE is way way ahead of the curve on this



New Construction – What ZNE Looks like - San Ysidro Senior Village





New Construction – What ZNE Looks like - Day Creek Villas



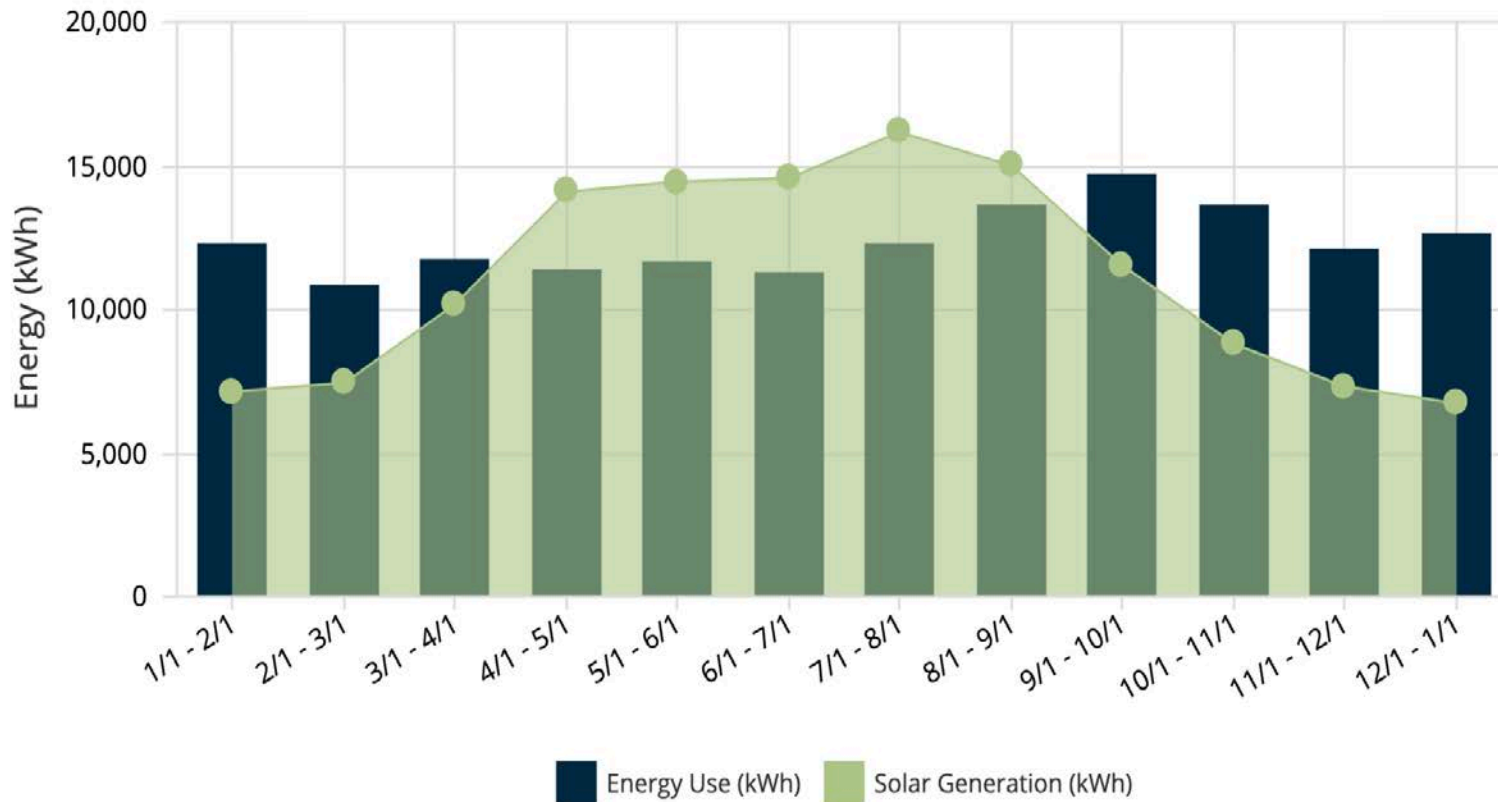


New Construction – What ZNE Looks like - Day Creek Villas



# Operational Economics Utility Energy vs. Solar PV Energy

## Monthly Energy Use vs Solar Generation



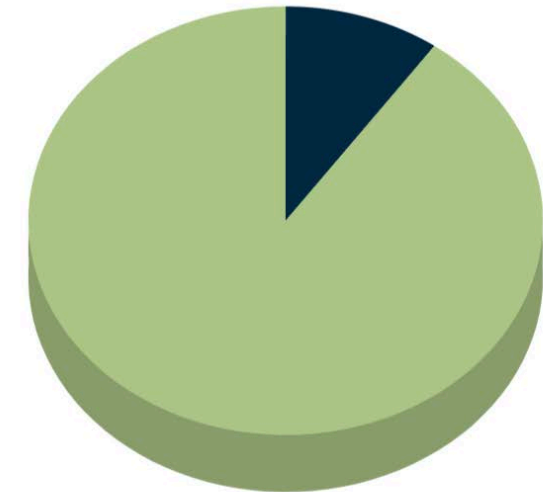
## Solar PV System Rating

Power Rating: 91,000 W-DC

Power Rating: 79,266 W-AC-CEC

## Energy Consumption Mix

Annual Energy Use: 148,062 kWh



Utility	14,529 kWh (9.81%)
Solar PV	133,533 kWh (90.19%)

# Add robust PV – New Electricity Budget

## Rate Schedule: SDG&E - TOU-DR1

Time Periods	Energy Use (kWh)			Charges	Charges	
	On Peak	Off Peak	Super Off Peak		NBC	Energy
1/1/2018 - 2/1/2018 W1	2,746	681	1,942	\$212	\$1,816	\$2,028
2/1/2018 - 3/1/2018 W1	1,996	-334	2,022	\$176	\$1,233	\$1,409
3/1/2018 - 4/1/2018 W2	1,545	998	-619	\$184	\$654	\$838
4/1/2018 - 5/1/2018 W2	749	-446	-2,114			
5/1/2018 - 6/1/2018 W3	338	-4,214	1,314	\$1,554	\$1,754	
6/1/2018 - 7/1/2018 S1	-476	-3,605	1,314			
7/1/2018 - 8/1/2018 S1	-370	-4,038	1,114	\$2,049	\$2,251	
8/1/2018 - 9/1/2018 S1	901	-3,327	1,614			
9/1/2018 - 10/1/2018 S1	2,044	-418	2,114	\$1,688	\$1,900	
				\$2,070	\$2,292	
				\$7,097	\$9,251	

**Annual Electricity Savings: \$47,525**

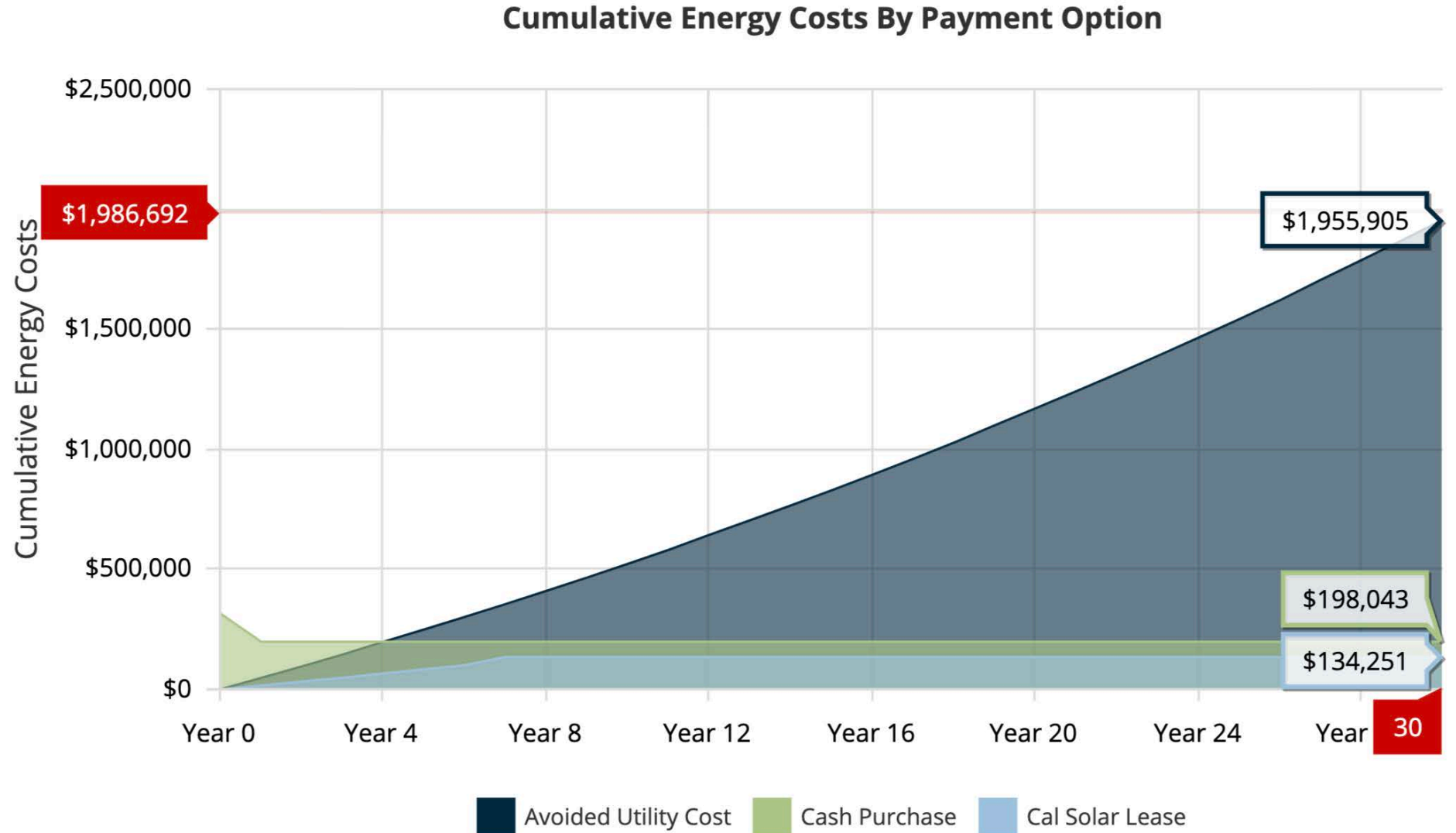


# If you remember one slide, remember this one

What does \$47,000 in annual utility savings look like over time?

**San Village –  
51 Units –  
Housing for  
the formerly  
homeless –  
project is  
master  
metered**

**\$2M of  
operational  
savings in  
30 years**



# Existing Portfolio – Managing Energy, Optimizing Cash Flow

It's about understanding the data...



Dashboard

Properties

Data

Analysis



Account

Help



## Welcome to your WegoWise Dashboard

We're excited to bring you our new interface for analyzing performance across your portfolio. This dashboard is in beta, and we'll be making updates to the design and functionality as we identify bugs and respond to your feedback.

If you encounter cells without data, contact your client manager to get help diagnosing the issue.

[Send us feedback](#)

### Total Spend ⓘ

**\$5.09M** Nov '19 - Oct '20

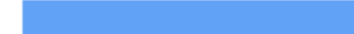
Electric \$1.21M



Gas \$648k



Water \$3.23M



National CORE spends \$1.21M/year in electricity – adding renewables will help with this

National CORE spends \$648K/year in natural gas – fuel switching and adding photovoltaics will help with this

National CORE spends \$3.23M/year on water – this is 100% of our projects' water. We are making progress on this



# SOMAH (Solar on Multi-Family Affordable Housing)

If you're an affordable housing developer – you should be doing this at portfolio scale – NOW!



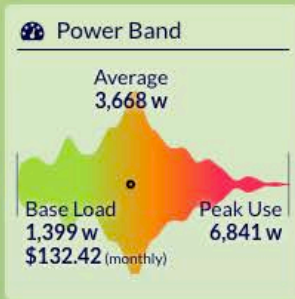
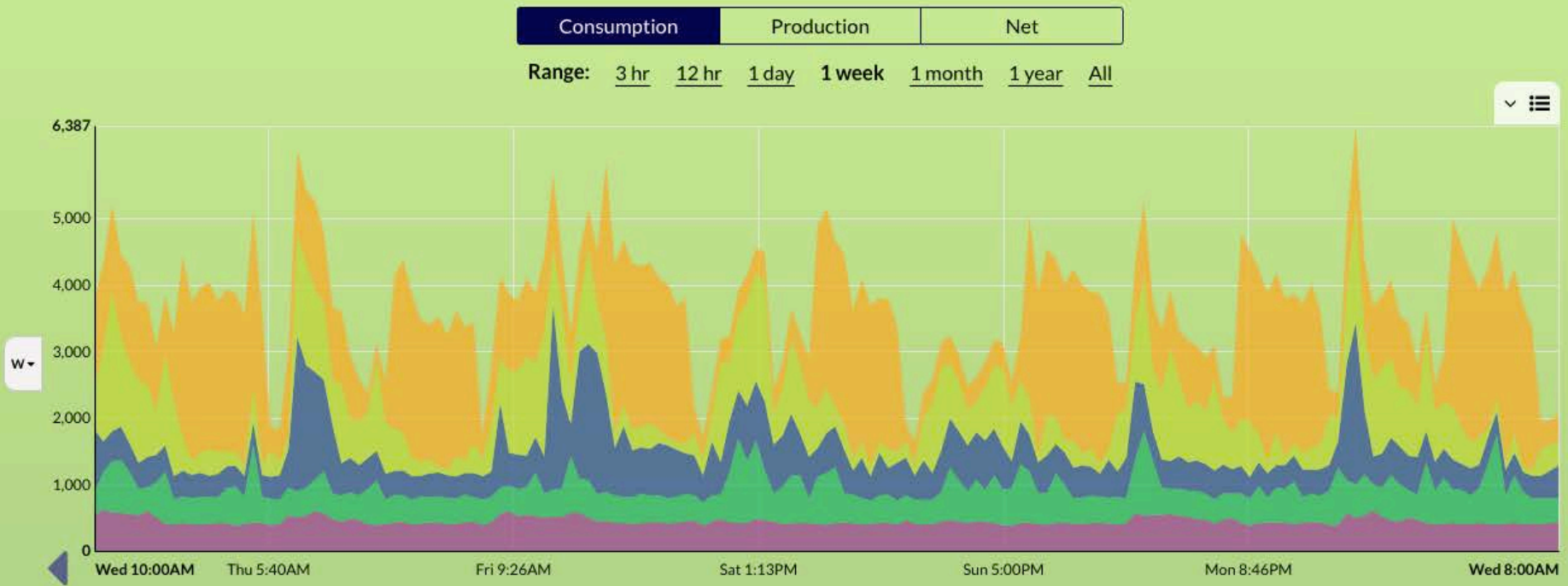
National CORE is in the midst of installing 15MW of SOMAH Funded PV on 55 different projects

We have leveraged more than \$20M in rebate funds

Without coming out of pocket, our residents electricity bills will go to near zero, and our operational energy costs will be reduced by at least 40%.



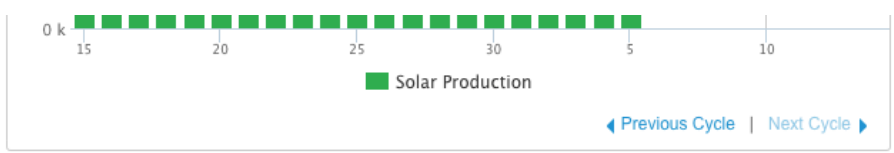
# The Internet of Things – Why internet connectivity is important



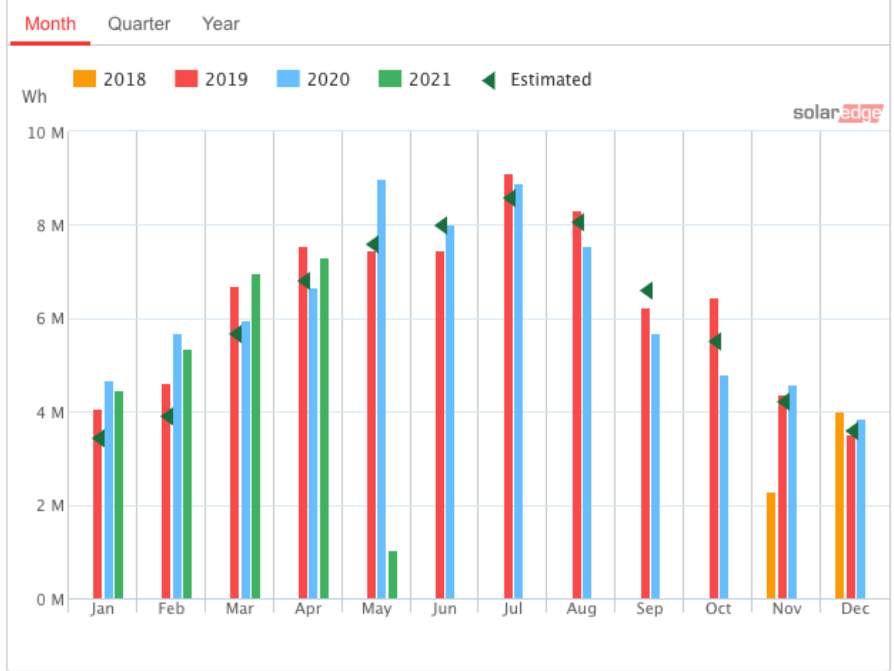
# The Internet of Things – Why internet connectivity is important

**solar**edge Home Timothy Kohut ▾

Dashboard Layout Admin



Comparative Energy CSV



Choose a site (insert at least 3 letters to search):

Environmental Benefits ?

CO2 Emission Saved  
**303,804.5 lb**

Equivalent Trees Planted  
**2,295.52**

Choose a site (insert at least 3 letters to search):



ID	906955
Name	Oakcrest Heights
Address	Oakcrest Circle 22737, Yorba Linda, California, United States
Installed	10/01/2018
Last Updated	05/05/2021 09:48
Peak Power	48.6 kWp

**Mostly Sunny**  
68 °F  
Feels like 68 °F

Wind SSW, 0 MPH  
Humidity 72 %  
Sunrise at 05:58  
Sunset at 19:39

**Mostly Sunny**  
68 °F  
Feels like 68 °F

Wind SSW, 0 MPH  
Humidity 72 %  
Sunrise at 05:58  
Sunset at 19:39

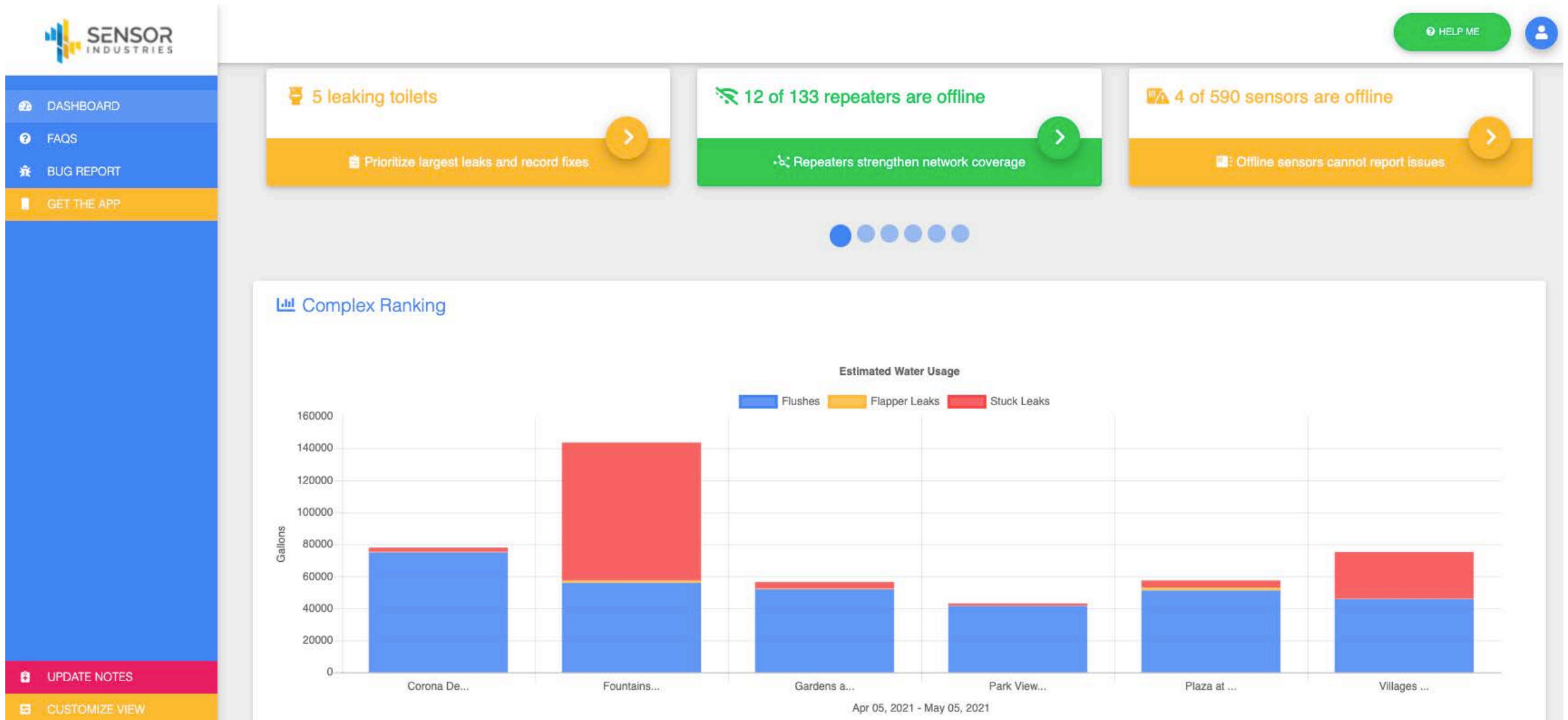
Wednesday	Thursday	Friday
82 - 57 °F Partly Cloudy	77 - 57 °F Sunny	75 - 55 °F Mostly Sunny

Environmental Benefits ?

CO2 Emission Saved  
**303,804.5 lb**

Equivalent Trees Planted  
**2,295.52**

# The Internet of Things – Why internet connectivity is important





# The Internet of Things – Why internet connectivity is important

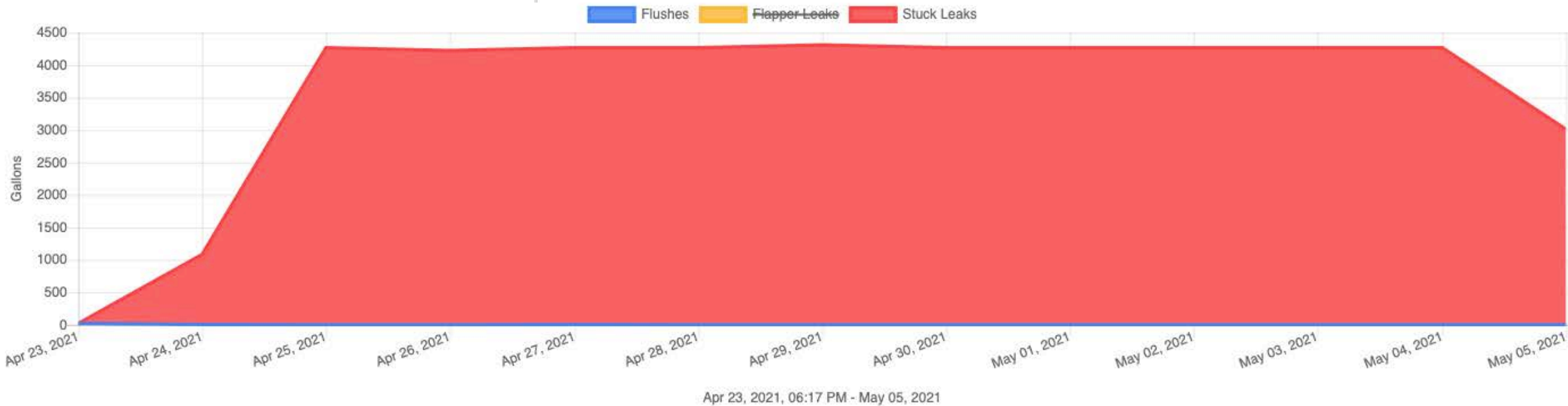
**Toilet Work Orders**

Show 10 entries CSV EXCEL PDF PRINT Filter:

Work Order	Complex	Unit	Serial	Category	Total Wasted (Gallons)	Opened Date
#15972	Fountains at S...	113 (Bathroom)	18112	Stuck Leak	46,787	Apr 24, 2021
#16007	Fountains at S...	218 (Bathroom)	21588	Stuck Leak	37,483	Apr 26, 2021
#16144	Villages at Si...	136 (Bathroom)	18211	Stuck Leak	25,610	Apr 29, 2021
#16249	Gardens at Sie...	122 (Bathroom)	21647	Stuck Leak	2,653	Apr 29, 2021
#16226	Plaza at Sierra	27-207 (Bathroom)	21257	Stuck Leak	1,489	May 04, 2021

1 - 5 of 5 << < 1 > >>

Volume History



# What can you do with this savings? We build Hope



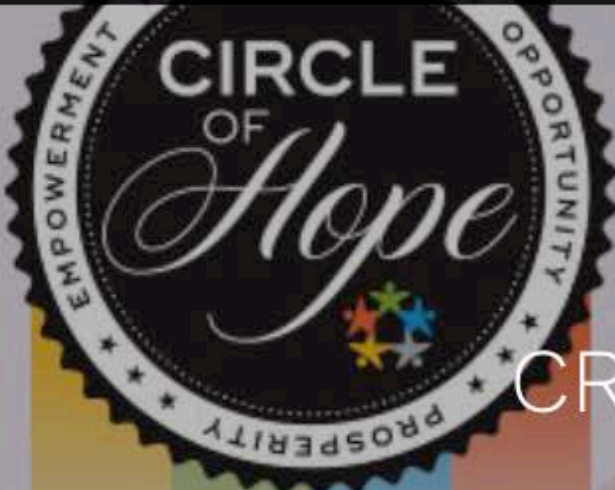
About Us ▾ What We Do ▾ News ▾ Awards Portfolio Contact 🔍

Planning & Development

Construction

Property Management

Hope through Housing



## CREATE A LEGACY OF HOPE

[LEARN MORE ABOUT HOPE THROUGH HOUSING](#)



• • • *Together, we transform lives and communities* • • •



David Saunier

Founder and Partner, Centri Tech



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[www.centri-tech.com](http://www.centri-tech.com)





# Affordable Broadband + Resident Impact for Low-Income Housing Properties

May 2021

# Broadband in America



163M do not use broadband

- Major carriers are disincentivized to deploy in low-income and rural communities
- Inefficient deployment of capital
- Socioeconomic challenges preventing adoption

# Digital Advancement



**Closing the “Digital Divide” does not stop at making sure everyone is connected.**

**Our approach includes:**

- 1. Deployment of broadband infrastructure and Internet of Things (IoT)**
- 2. Increasing adoption through life-enhancing programs and uses of technology**



# Property-Owned Network Infrastructure

## 1. Discover: Network

### Assessment

Conduct tailored assessment of network needs with recommended technology solutions.

## 2. Implement: Hardware

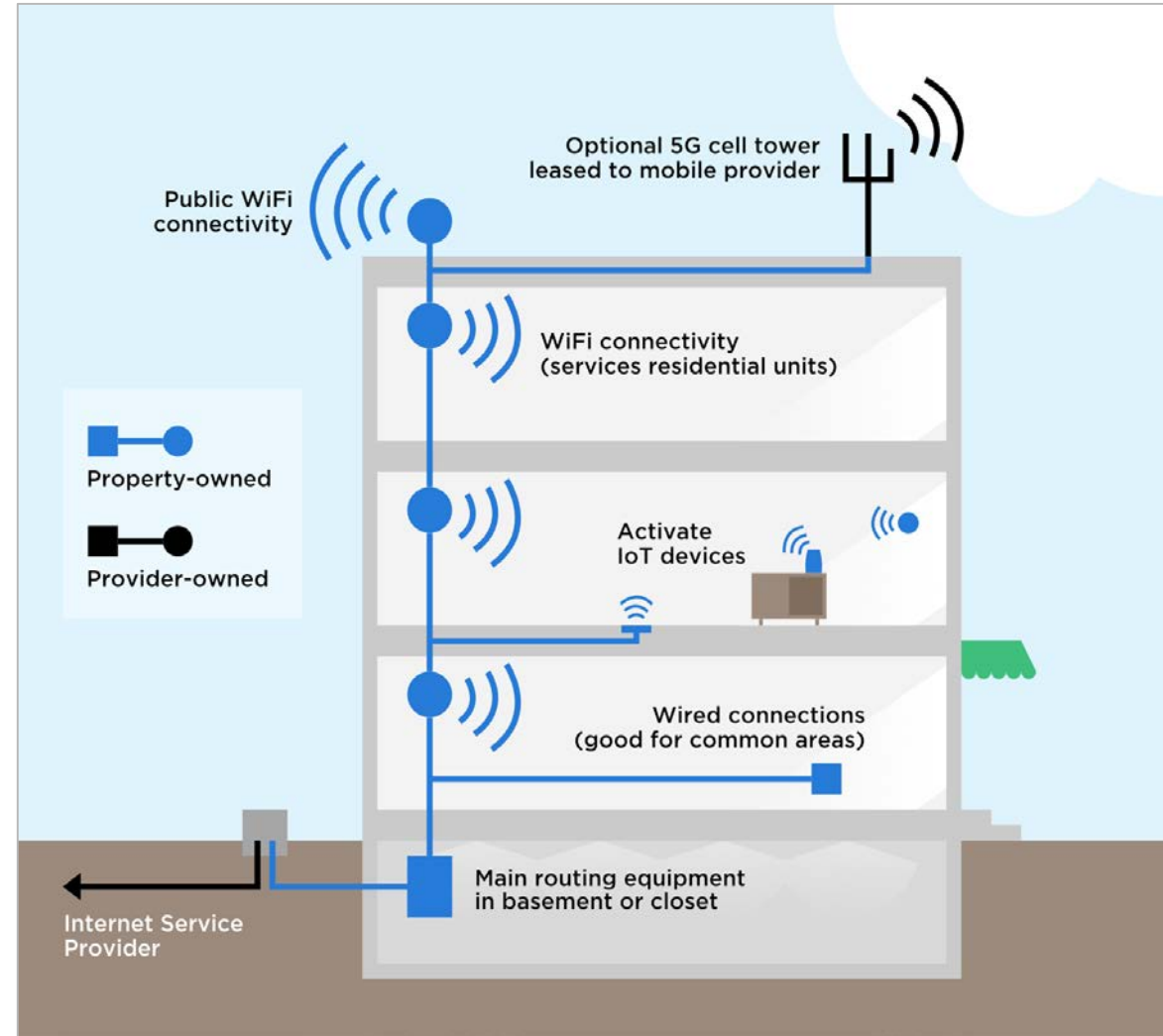
### Installation

Implementation and configuration of network infrastructure build out and associated services based on developer/owner needs.

## 3. Advance: Community

### Connectivity

Residents enjoy dependable, high-speed broadband connection via a property-owned and managed network (no per-resident ISP contracts).



# Resident Impact Program

## 1. Discover: Opportunity

### Assessment

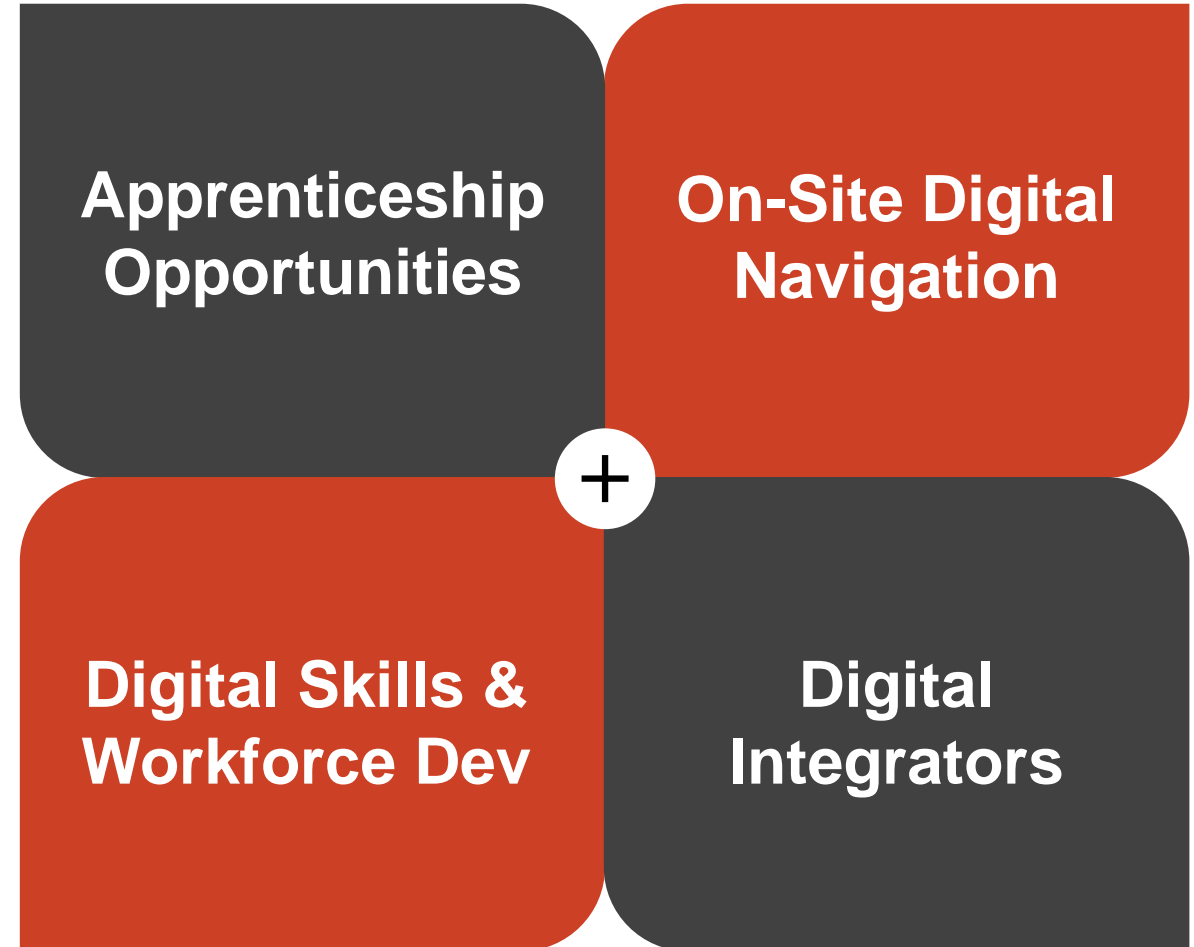
Tailored engagement to determine optimal tech adoption and social impact strategies.

## 2. Implement: Delivery + Impact

Work with property owners to match local talent with local needs. Train residents to deliver digital services to communities.

## 3. Advance: Tangible Outcomes

Create pathways for residents to engage in work-based learning, develop skills for in-demand jobs, and earn credentials with real market value.





# Making the Financials Work

- Offset monthly OPEX with:
  - Tiered broadband pricing
  - Streaming service bundles
  - 5G small cell antenna leasing
- Increased Tenant Retention: **5-8%**
- Reduction in Utility Costs: **20-30%**
- Reduction in Labor Costs: **5-7%**
- Increased property value: **location dependent**

# Thank You



David Saunier

Centri Tech

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# Chris Burger

## Technology Program Manager, EAH Housing



[Chris.Burger@eahhousing.org](mailto:Chris.Burger@eahhousing.org)

[www.eahhousing.org](http://www.eahhousing.org)







# A matter of *quality* living.



- According to Harvard Professor & Chairman of Dept. of Social & Behavioral Sciences, **Dr. David Williams**, *“there is a 20-25 yr. gap in life expectancy based on the communities we live in. We determined that there are three key pillars. **One** is community wellness and community health with a sense of community spirit. **Another** is accessible affordable housing, and the **third** is education.”*

# Agenda



1. Introduction to the EAH Digital Literacy Program
2. EAH Sites, Vendors & Partners
3. Curriculum/Devices
4. Key Performance Indicators
5. Photos/Success stories
6. Q & A



# Overview

*“ A lack of effective Digital Literacy training puts one at a disadvantage in many areas, including being vulnerable to internet scams and threats. A lack of Digital Literacy puts one at a disadvantage in job search and application, educational betterment, healthcare needs, isolation mitigation, a lack of general information, and ultimately a lack of opportunity and equity.”- Kristin Taylor, Director Resident Services.*



“RIOS” or River of Digital Literacy  
R= access to RESOURCES  
I = access to INFORMATION  
O=access to OPPORTUNITY  
S= access to SERVICES



# Intro to the EAH Digital Literacy Program



## Closing The Digital Divide- "The Journey since 2017"

- ❖ Access to affordable and effective Broadband
- ❖ Internet-capable devices.
- ❖ Digital literacy training and tech support.
- ❖ Curriculum and content that addresses the needs of learners.
- ❖ Fostering community, neighbors assisting neighbors, sharing best practices and resources.





# The Golden Triangle

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**Technology-** computer, tablet, reliable internet access.

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**Processes-** digital literacy curriculum, continued tech support.

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**People-** EAH Residents, EAH Staff, Leadership, Instructors, Vendor Partners.



# EAH Sites Serviced 2018-2020 | EAH Sites Serviced 2021- Current

- |                               |                        |
|-------------------------------|------------------------|
| 1. Buchanan Park              | 16. Riviera Apartments |
| 2. Casa Adobe                 | 17. Rodeo Gateway      |
| 3. Centertown                 | 18. San Clemente Place |
| 4. Cochrane Village           | 19. Silver Oaks        |
| 5. Don De Dios                | 20. The Oaks           |
| 6. Drakes Way                 | 21. Turina House       |
| 7. Elena Gardens              | 22. Vista Park 1       |
| 8. Floral Gardens             | 23. Vista Park 2       |
| 9. Fountain West              |                        |
| 10. Golden Oak Manor          |                        |
| 11. Los Robles                |                        |
| 12. Palm Court                |                        |
| 13. Park Place/Village Avante |                        |
| 14. Point Reyes               |                        |
| 15. Pollard Plaza             |                        |

1. Estrella Vista
2. Fellowship Plaza
3. Mackey Terrace
4. Markham Plaza I
5. Markham Plaza II



# Vendor Partner Learner Web (first grant 2018-2020)



- Online Curriculum, Learning Management System (LMS)
- Ability to log the amount of time a user spends on lessons
- Over 100 hrs. of learning plans focusing on Internet Skills (beginner), Advanced Digital Skills (intermediate to advanced), Financial Digital Literacy, and Digital Health Literacy.
- Simple quizzes to improve information retention and validate learning.





Vendor Partner  
Urban Equity  
Group (Current  
grant, 2018-  
Now)



- Provides refurbished MS Windows 10 laptops and new Android tablets.
- Online Moodle LMS curriculum complete with videos, quizzes, and tools.
- In-person & remote Digital Literacy instruction in Mandarin, Spanish, and English.



# Process



**Step 1.-** Funding from CPUC grants and matching EAH monies.

**Step 2.-** Outreach Events, Promotion and registration of EAH residents into the program.

**Step 3.-** Pre class survey to discover the needs and current digital literacy level of each resident/student.

**Step 4.-** Student is enrolled in the appropriate Cohort and learns necessary digital skills.

**Step 5.-** Ongoing class with instructors are augmented with online accessible self-paced lessons.

**Step 6.-** Student Graduates and receives device and diploma, post survey is completed.

**Step 7.-** Ongoing Tech support is available through in-house EAH staff.



# Browsing the internet SAFELY & protecting our Residents



- Safely logging onto the EAH Free WIFI
- Password Complexity
- Knowing there are different browsers to use like <https://duckduckgo.com/>
- Anti-Virus Tools, some free at <https://ninite.com/>
- Software and Operating System updates
- Helpful sites such as <https://haveibeenpwned.com/> , <https://www.virustotal.com/gui/>
- Knowing how to identify Phishing & Spam emails



# Identifying a Phishing Email attempt

- Look at the “From” address
- Notice the “To”
- “Dear Member” not your name
- Misspelling or poorly written
- By hovering (not clicking) any links, it doesn’t show the real company’s domain.
- There’ll usually be a tone of urgency for the recipient to act.
- Never share any information they ask for you to confirm your identity like PIN #, D.O.B. or last 4 of S.S.#

**From:** Bank of America <crvdqi@comcast.net>  
**Subject:** Notification Irregular Activity  
**Date:** September 23, 2014 3:44:42 PM PDT  
**To:** Undisclosed recipients: ;  
**Reply-To:** crvdqi@comcast.net



## Online Banking Alert

Would be capitalized

Dear member:

We detected unusual activity on your Bank of America debit card on **09/22/2014**. For your protection, please verify this activity so you can continue making debit card transactions ~~without interruption~~.

**Please sign in to** your account at <https://www.bankofamerica.com>

to review and verify your account activity, After verifying your debit card transactions we will take the necessary steps to protect your account from fraud.

<http://bit.do/ghsdfhgds>

If you do not contact us, certain limitations may be placed on your debit card.

Grammatical Error

© 2014 Bank of America Corporation. All rights reserved.



# Graduates receive Diploma & Continued Support

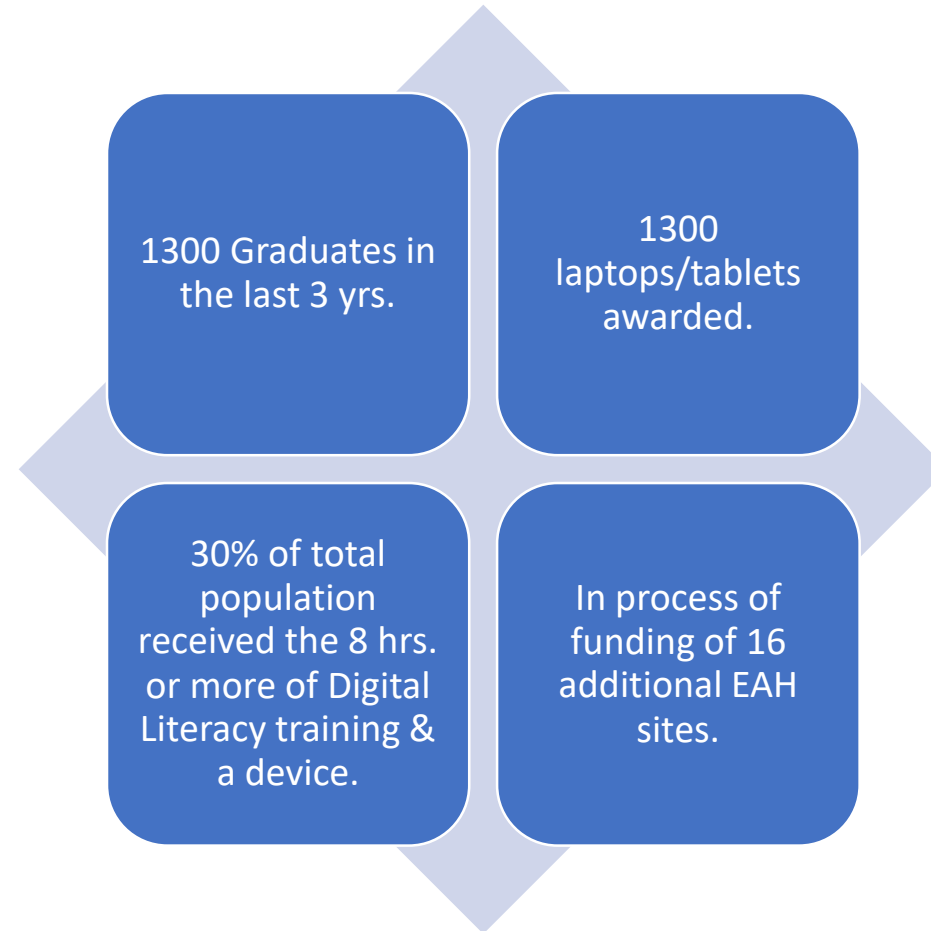
- In Photo 1, Florence from EAH Casa Adobe is receiving her graduation diploma.
- In Photo 2, graduation potluck & diploma award night for the resident/students of Silver Oaks in Oakley Ca.



# Key Performance Indicators



*Drakes Way. – Larkspur, CA*





## The “Aha Moment”

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- B.Neal is a resident/student at Casa Adobe in Richmond. She is a clothing designer. B. came to me and said, “I have a fashion show coming up and I have all these email addresses on different scraps of paper and several address books. How can I send an email blast?” We caught the exact moment, after entering all her contacts into Google contacts, that the test email went through. Note- She’s using one of the Casa Adobe kiosks.

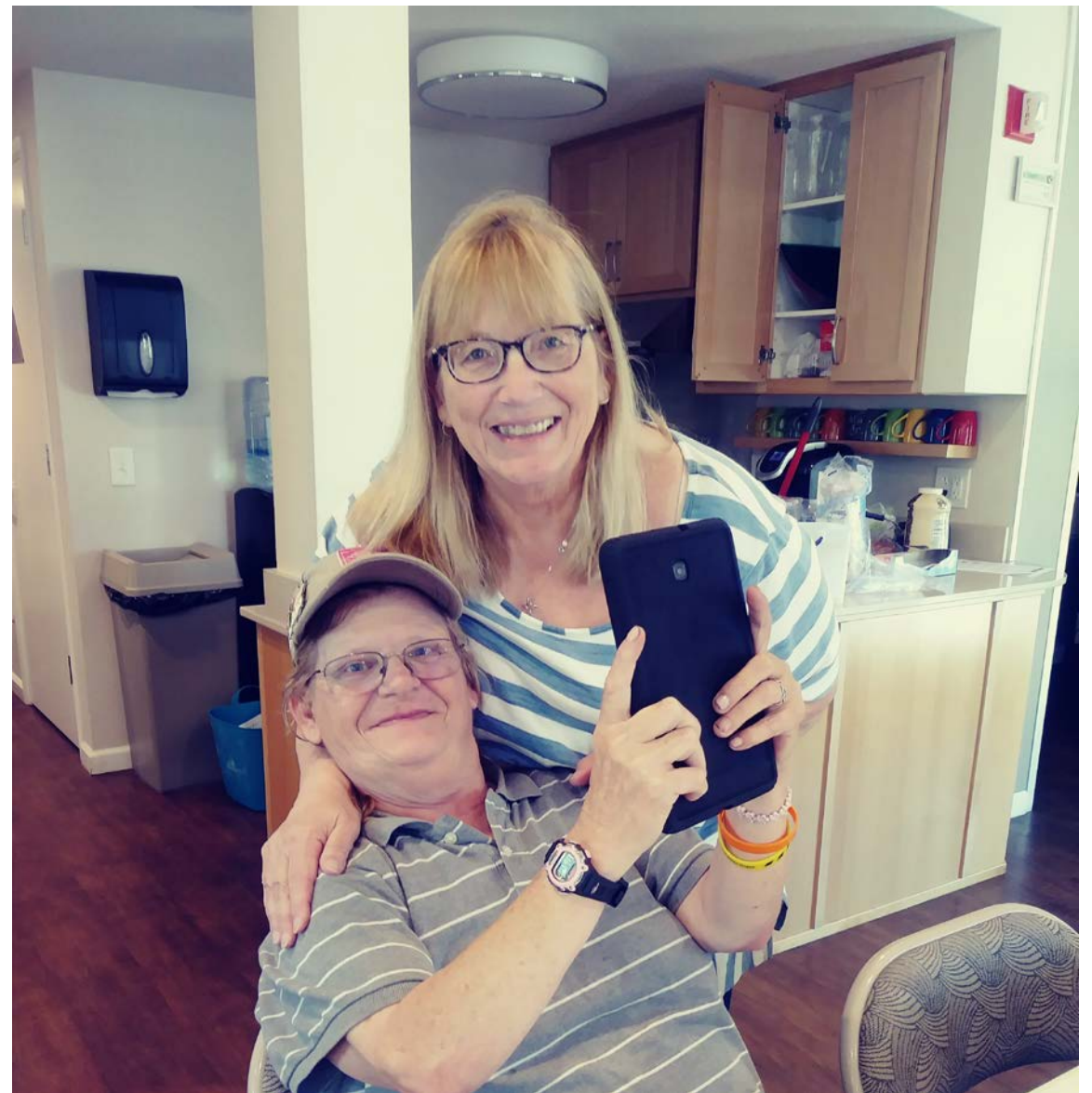


# Continued Tech Support.

- Virginia Silk is a resident at EAH Vista Park in San Jose. She is 94 yrs. Young. She already was a graduate in the fall of 2020, but She reached out to me for tech support in February 2021. She wanted to get her online banking app, Kaiser Permanente, and Facebook on her tablet home screen. This is her saying “Thank you” after completing the lesson. Note- We have another “date” as She puts it on May 6<sup>th</sup>, to put her Husband Dan’s KP.org account on the tablet too!

*“You and (instructor) Colleen telling me that I have a knack for computers has started a chain reaction. Not only do I have a knack for computers, but I just found out I am pretty good at painting also. The confidence building experience has come at a well needed time in my life as I will soon be adventuring out on my own”*

**- Lori Dalio** EAH Silver Oaks  
Resident

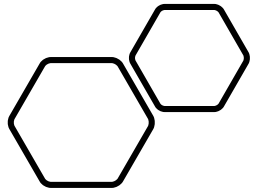




Artwork by  
Digital  
Literacy  
Student Lori  
Dalio



MT305-Amber Turner "I learned about security from Digital Literacy training. I started to use my newer computer and Chrome and found out that my accounts are compromised and I reacted immediately! Thanks so much for your teaching."



SUCCESS!



Elvira Garcia Nava

*"Thanks to this program I learned how to connect my new tablet to the internet, I also learned how to send emails, now I can email my doctor and not be on hold on the phone. I also learn how to download applications like Whats App and I was able to video chat and see my mother."*





"We did not have any computer at home. Now, We are more prepared for Fall 20 school year. Thank you"

113

Thank you!





# [www.eahhousing.org](http://www.eahhousing.org)

Offices: San Rafael, Honolulu, Fresno, Los Angeles, Morgan Hill  
CA Lic. 853495 | HI Lic. RB-16985



More than 50 years ago, EAH Housing was founded with the belief that attractive, affordable housing is the cornerstone to sustainable communities.

***A roof is just the beginning.***



# Legislative Overview / Policy Updates

Pending or current proposals at the federal  
and local level

# State Legislation

- AB-1425: California Emerging Technology Fund
- AB-14 / SB-4
- AB-34: Broadband for All Act of 2022 / Internet for All Act of 2021
- CPUC Update

# Federal Legislation

- American Rescue Plan
- FCC Emergency Broadband Benefit
- Biden Infrastructure Plan 2021





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