



LUMENA ENERGY™

ENERGY COMPENDIUM

Q1 2022

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A WORD FROM THE FOUNDER

STEPPING INTO A NEW ERA OF CLEANTECH

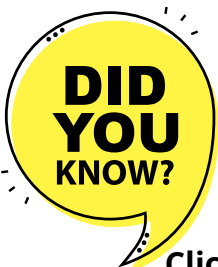
By David N. Jones
Photo courtesy of Lumena Energy

Since the very inception of our firm, our intent has been on moving the needle from a static to a dynamic, responsive energy environment. We are getting ever closer to that milestone.

First principles thinking helped us drill down into what was most important--providing decentralized renewable energy for every man, woman and child on Earth. A higher quality of life for our global community is achievable, and at its core is sustainable energy.

It is our hope we will achieve a safer, healthier more intuitive society for all within our lifetime.

Thank you for being apart of our journey.



Click on book throughout compendium for reference links



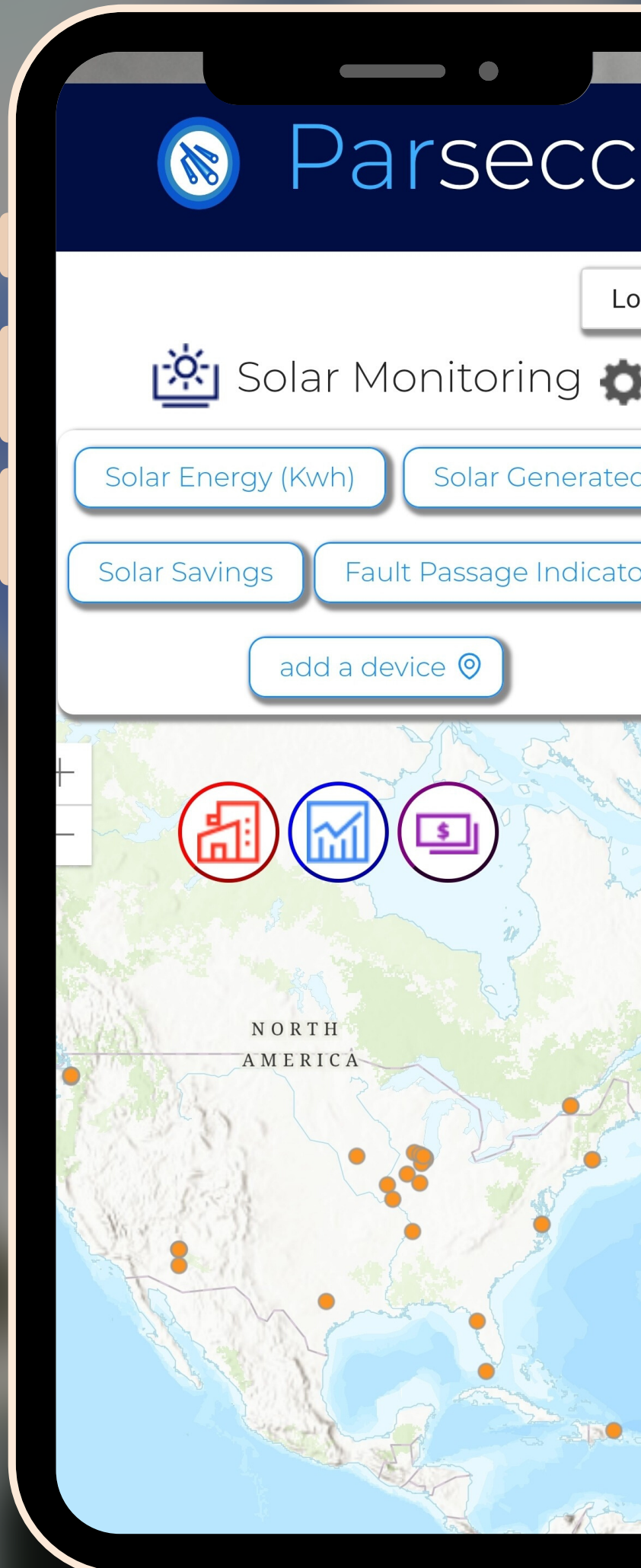


**LUMENA
ENERGY™**

**Share Energy. Store
Energy. Guilt Free.**

**Decentralized
energy for all.**

www.lumenaenergy.com





METHODS



Understanding the abstract
and otherwise virgin territory
of Virtual Power Plants and
Smartgrid Technology

PARSECC EMS DASHBOARD

Virtual Power Plant
Energy Management System

Version 2.1 of our dashboard boasts a number of new features such as:

Solar Savings Tracker

Fault Passage Indicator Portal

Add A Device

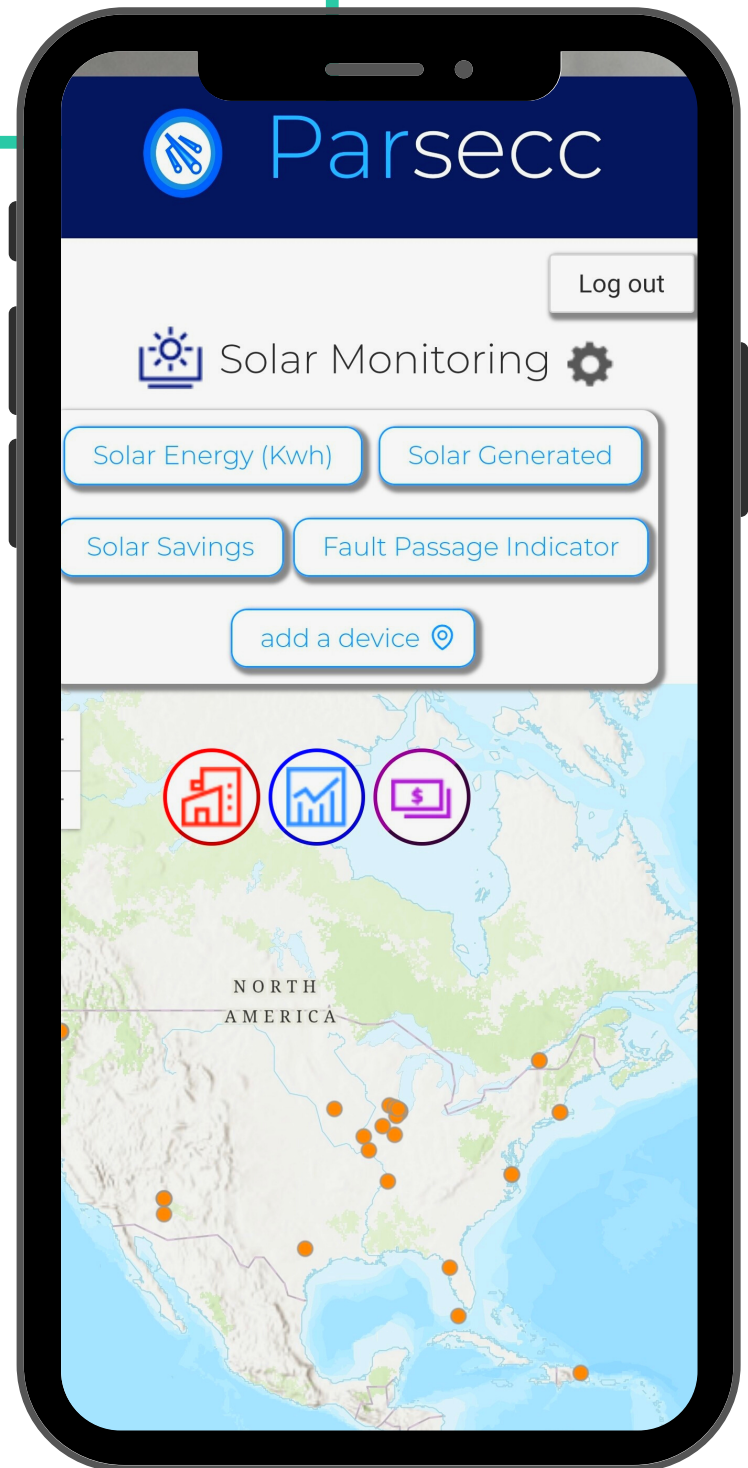
Earnings Section

Take note that it has evolved drastically from the original version.

Administrators can now conveniently view all of their properties via a map or list function and interact with individual properties.

Each property is now identified by both a physical address as well as their **blockchain Unique User Asset ID**.

We are working toward launching our own crypto token for energy blockchain transactions this year.



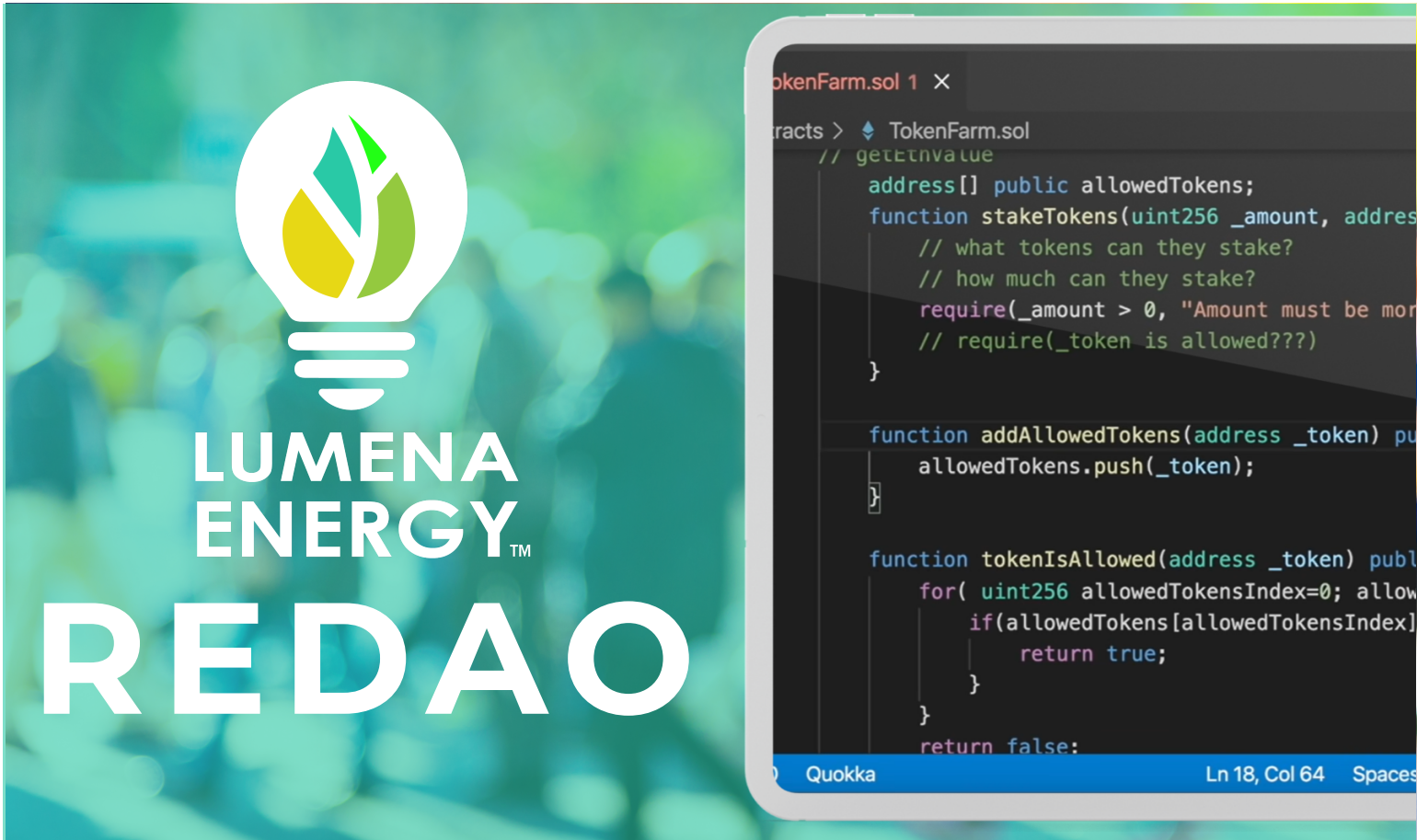
HOW WILL GOVERNMENTS AND VPP'S INTERACT?

Let's face it, bureaucracy is a painfully slow process with far too many moving parts. We are working to eliminate the bottleneck between governments and businesses. This will enable a high bandwidth energy ecosystem where rules and policies will automatically be executed with little to no need for a middleman.

How It Works:

A **Smart Contract** establishes regulatory, safety compliance, pricing model, distribution and a tariff framework. Think of it like software that creates an agreed upon set of rules to allow virtual power plants to work with little to no human interaction.

Lumena Energy's **Renewable Energy Decentralized Autonomous Organization** or **REDAO** for short serves as the social layer which enables Node Owners to vote on new policy, collaborate with other node owners and execute energy blockchain trades as well as have a direct line of communication to their local governing body.



The image features the Lumena Energy REDAO logo on the left, which includes a stylized lightbulb with a green leaf inside, and the text "LUMENA ENERGY™" and "REDAO" in large white letters. On the right, a code editor window displays Solidity code for a smart contract named "TokenFarm.sol". The code includes functions for staking tokens, adding allowed tokens, and checking if a token is allowed.

```
TokenFarm.sol 1 x
contracts > TokenFarm.sol
// getTokenValue
address[] public allowedTokens;
function stakeTokens(uint256 _amount, address
    // what tokens can they stake?
    // how much can they stake?
    require(_amount > 0, "Amount must be mor
    // require(_token is allowed???)
}

function addAllowedTokens(address _token) pu
    allowedTokens.push(_token);
}

function tokenIsAllowed(address _token) publ
    for( uint256 allowedTokensIndex=0; allow
        if(allowedTokens[allowedTokensIndex]
            return true;
        }
    }
    return false;
```



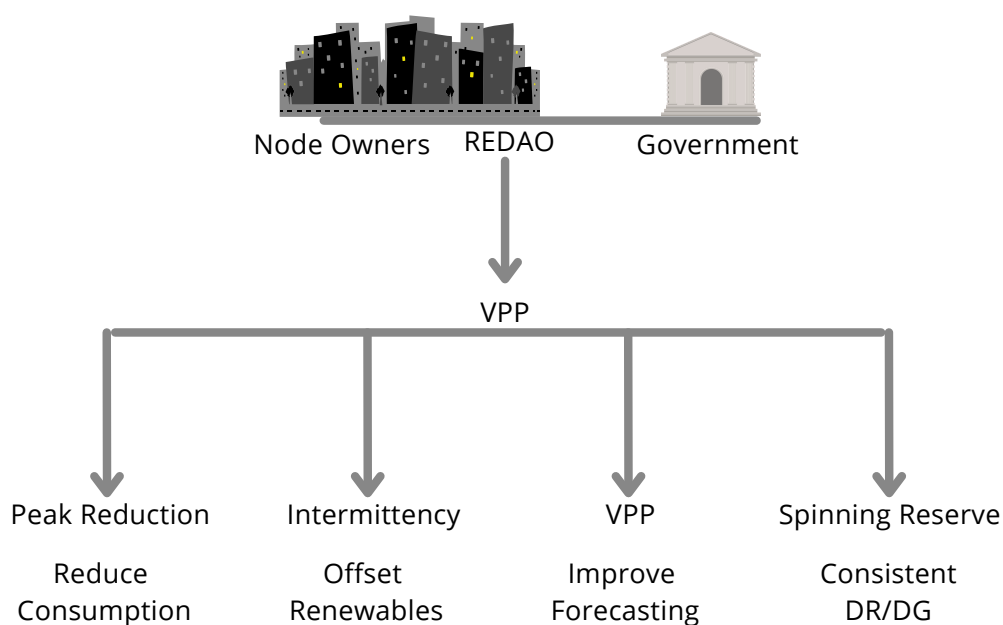
WHAT DOES **BLOCKCHAIN** MEAN FOR THE **ENERGY** SECTOR?

As we enter the era of **Web 3.0**, blockchain and tokenized transactions will become the new norm for practically every facet in the exchange of information, goods and services. Publicly auditable ledgers will record and facilitate energy transactions between generators and consumers of energy. This includes such actions as peer-to-peer energy transactions.

ISO/Wholesale means energy trades will operate much like the Stock Exchange. Instead of having a fixed rate, energy prices will fluctuate based upon indexes set by generators where the consumer can bid for the lowest rate.

Tokenized Transactions will enable platforms such as Parsec to provide a 1:1 ratio. Buyers and sellers will be able to conduct business across state lines and even across international lines. The revenue amount will be automatically sent to the generator in the form of a crypto token where it can later be converted to the currency of their choosing.

Real Estate NFTs will become commonplace in the Metaverse as Utility and Civil Engineering Sectors use them to easily identify create new schematics. Crypto miners may even use them to locate generators to avoid high gas fees.





HOW DO WE MEASURE OUR VPP SYSTEM PERFORMANCE?

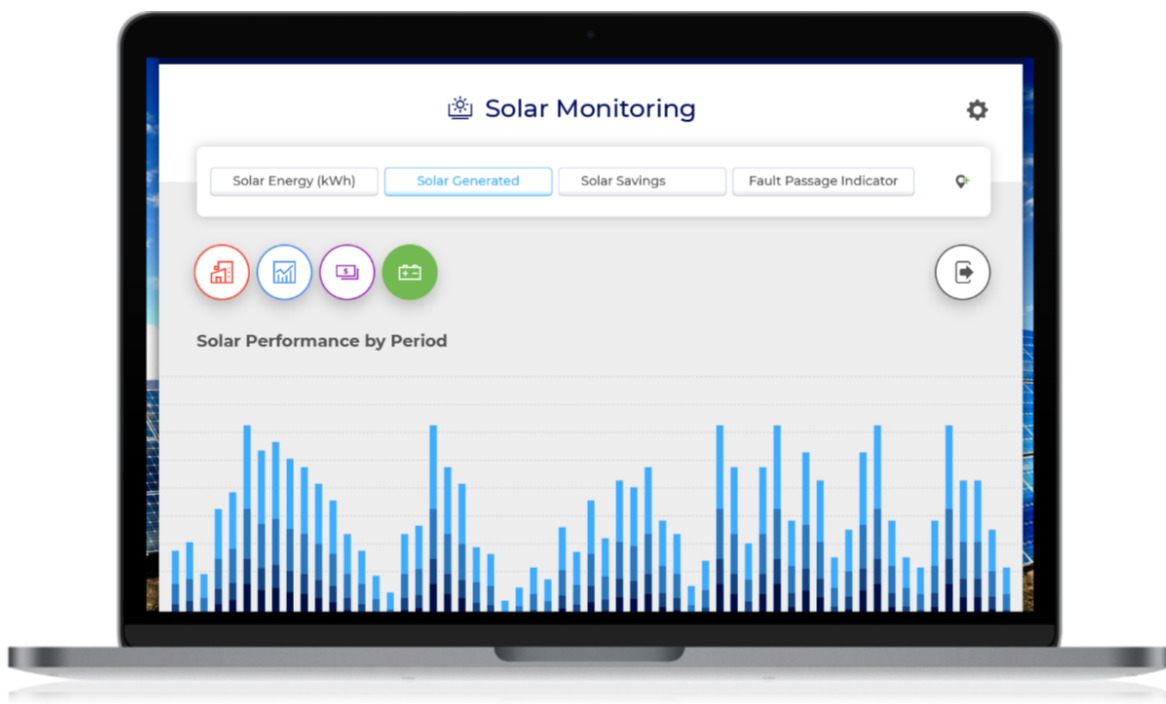
At our core, [Lumena Energy](#) is a Big Data company.

Data-driven decisionmaking is the driver of the success of a virtual power plant. Each minute our system is online, the efficacy of our AI improves, it executes large batches of tasks, such as energy forecasting which predicts the demands of a market. Each node added to our network provides **hundreds of individual datapoints** per property, and as the platform grows we expect to process terabytes of data per hour, 24/7.

By default every node updates every **3 minutes** which not only contributes to the ecosystem overall but also shares individual health stats that alerts the user when components are underperforming or need to be replaced.

Everytime our node owners execute an **energy blockchain transaction**, the instance is recorded and that information remains publicly available forever and cannot be altered.

All of this data is relayed to our analytics dashboard in realtime thus exponentially improving our ecosystem, we set our target of servicing **a billion homes to be achieved by 2032**.





HOW WILL VPP'S SAVE LIVES DURING NATURAL DISASTERS?

The old adage "**Don't put all of your eggs in one basket**", comes to mind. As we've seen throughout history time and again, our global community has made a fatal error of placing all of its trust in centralized organizations. This is especially true when it comes to our electrical grids.

In areas that are most prone to natural disasters e.g. cities below sea level and island nations, having at bare minimum a partially decentralized grid could mean the difference between life and death for billions of people.

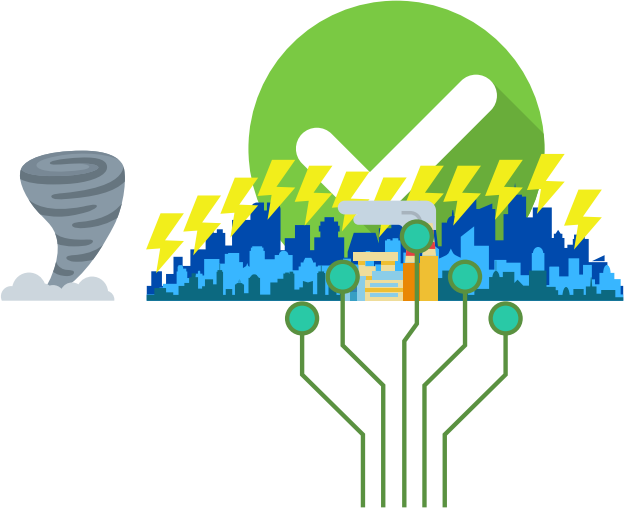
- Virtual Power Plants provide **Realtime Updates**
- **Multiple points of failure** means redundancy under massive catastrophic outages.
- AI provides accurate **Energy Forecasting**
- **Renewable Energy Decentralized Organizations (REDAO)** provide direct-to-consumer communication with utility providers and local governments
- System redundancy means **Rapid Response**, grids can be reassembled many times faster

Distributed Energy Resources (**DER**) and the aggregation of energy sources is the future.

Centralized Static Grid



Decentralized Dynamic Grid



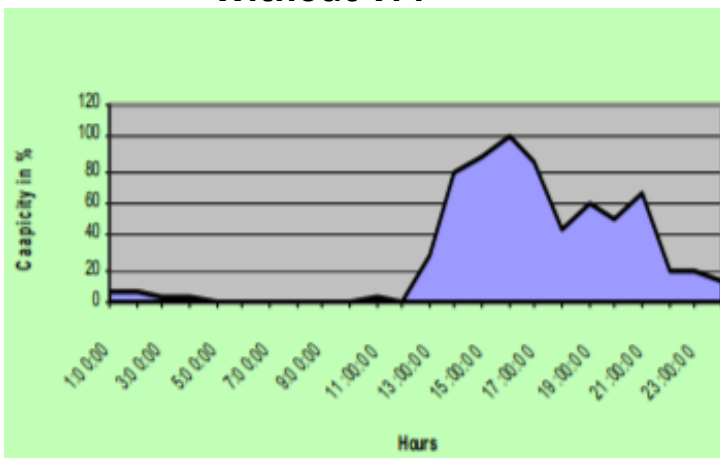


CAN WE MEET AMERICA'S ELECTRICITY DEMAND?

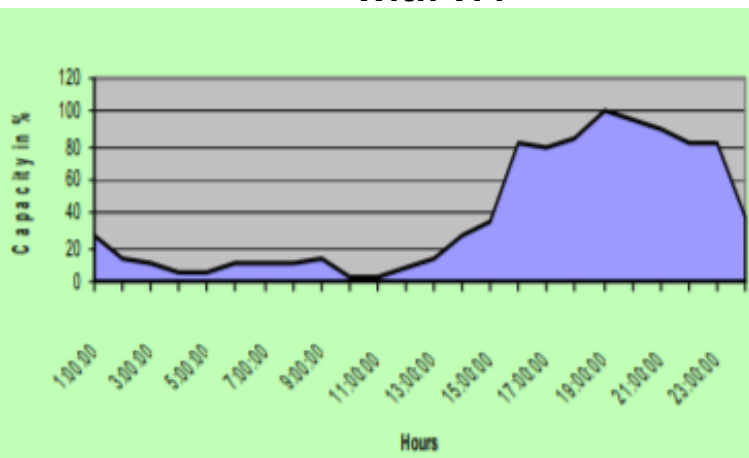
At this point, energy portfolio diversification should be commonplace talk in government. Smart grid technologies have made large inroads into the utility space

The average U.S. home uses about 900 kWh per month. So that's 30 kWh per day or 1.25 kWh per hour.

Without VPP




With VPP



**100MW of energy from a VPP
can power up to 16,400 homes**



 = 1,000 homes*

WILL VPP'S INCREASE GLOBAL ELECTRICITY CAPACITY?



To put global needs into perspective, an area of **335 x 335km** or **208 miles** covered in solar panels and connected by [Parsecc](#) could easily produce **17.4 Terawatts** of power--this could power the entire Earth using only solar energy. For feasibility purposes, the State of Texas by itself is **268,597 mi²** and has **15.77 billion acres** of uninhabited land.

A mega structure of this scale could be built in under 10 years, and with proper maintenance could power the Earth indefinitely.



WHAT IS REQUIRED FOR VPP'S TO REACH SCALE?

Cooperation is the lynchpin of our success as a global community.

Harnessing renewable energy, redistributing it into an urban ecosystem and being able to track each transaction needs to happen. As the world's population rises and technology requiring energy grows it will create a seemingly permanent strain on our grid.

The biggest bottleneck of our generation is battery storage, we currently lack the critical battery materials to produce Lithium Ion units at scale. However, at the time of this writing there have been numerous breakthroughs in battery tech such as Sodium-Ion batteries, which could serve as a viable alternative.

By our studies, if **10%** of the world utilized virtual power plants, we would be able to sustainably power most major metropolitan areas and provide shared relevant blockchain data.





```
function b(b){return this.each(function()  
is.element=a(b)};c.VERSION="3.3.7",c.TRANSITION_  
t");if(d||(d=b.attr("href"),d=d&&d.replace(/.*(  
,{relatedTarget:b[0]}),g=a.Event("show.bs  
,this.a  
otype.  
ive").end().find('[data-toggle="tab"  
etWidth,b.addClass("in")):b.removeC  
.attr("aria-expanded",!0),e&&e()}va  
th);g.length&&h?g.one("bsTransition  
fn.tab.Constructor=c,a.fn.tab.noCont  
.bs.tab.data-api",[data-toggle="ta  
rn this.each(function(){var d=a(thi  
ction(b,d){this.options=a.extend({  
this)).on("click.bs.affix.data-api"  
his.checkPosition()};c.VERSION="3.3.7"  
=this.$target.scrollTop(),f=this.$elem  
null!=c?!(e+this.unpin<=f.top)&&"bott  
>=a-d&&"bottom"},c.prototype.getPinne  
a=this.$target.scrollTop(),b=this  
imeout(a.proxy(this.checkPositi  
ffset,e=d.top,f=d.bot
```

OUR DATA

Case Study of Device ID: 5491:5682

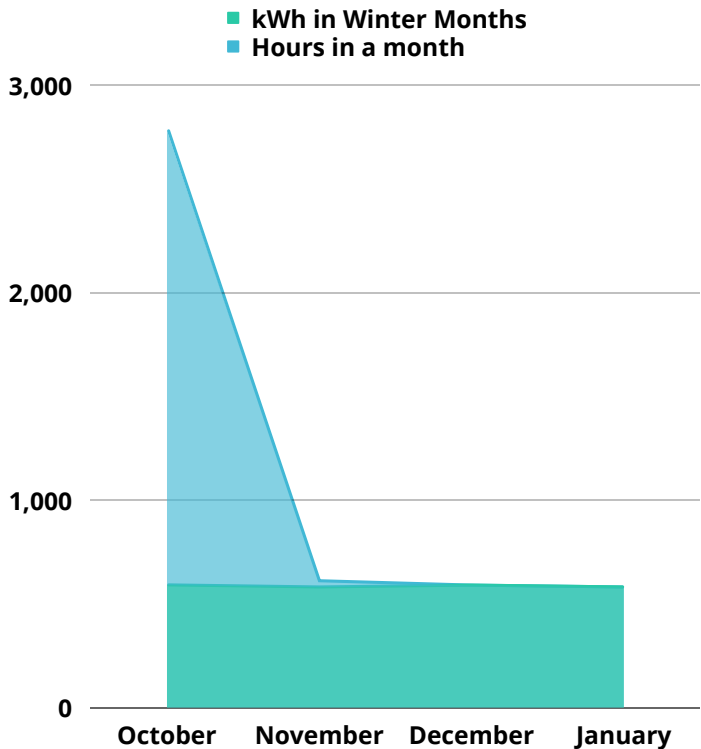
We launched the second version of [Parsecc](#) September 3, 2021, the system officially went live hosting over **30 nodes** spanning the **United States, Canada** and **The Dominican Republic**. The pilot program has been a successful venture so far, we stored and organized **3 months** worth of data from each device in our cloud server.

For our case study we focused attention on a property located in **Sedona, AZ**. The following 9 pages is raw data pulled from a solar array connected to our network. We focused on these datapoints:

- **AC Load**
- **Kilowatt Hours**
- **Data Usage**
- **Blockchain Energy Transactions**
- **Timestamp of Transactions**

For reference, the average U.S. home uses about 900 kWh per month. So that's 30 kWh per day or 1.25 kWh per hour.

$$P(W) = 1000 \times E(\text{kWh}) / t(\text{hr})$$



Cost per kWh: **\$0.045/kWh**
Data Generated: **1279.2mB**
Daily Average: **59 kWh**
14505.5 kWh
accrued over 90 day period



LUMENA ENERGY

VIRTUAL POWER PLANT NETWORK

Issued: 1/31/2022

Account ID#2bba0732

SERVICE THROUGH 10/01/21 THROUGH 1/31/2022

Device Node location: Sedona, AZ.

SOLAR RESIDENTIAL: SINGLE NODE

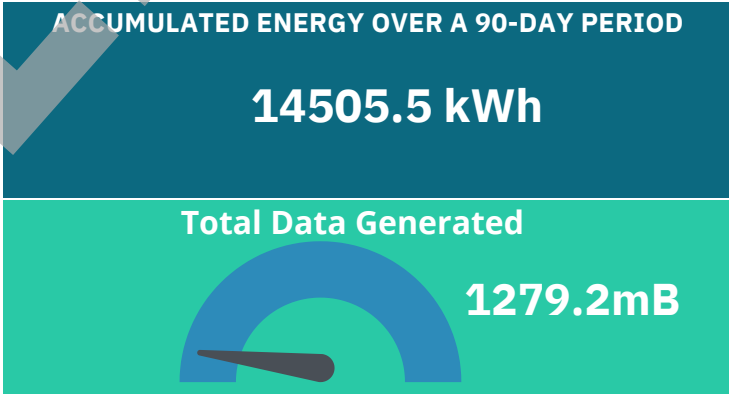
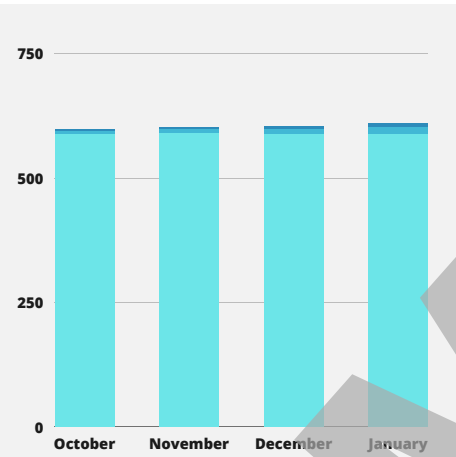
TOTAL OWED: \$62.63

CUSTOMER NAME

CUSTOMER ADDRESS
CITY, STATE ZIP CODE

TOTAL REVENUE \$652.74

Cost per kWh: \$0.045/kWh



14505.5 kWh

ENERGY TRANSACTIONS



247 ENERGY TRADES

LUMENA ENERGY FEES
5% Transaction Fee=\$32.63
Parsecc Software Monthly Fee: \$10

Device ID: 5491:5682

| AC Load | kWh | Data Usage (kb) | Energy Trades per Watt | Timestamp |
|-------------|------|-----------------|------------------------|--------------------------|
| 9378.354437 | 58.9 | 5.2 | 323 | 2021-10-01T04:54:45.108Z |
| 9135.680182 | 58.8 | 5.2 | 135 | 2021-10-01T16:54:45.134Z |
| 9031.805739 | 59.0 | 5.2 | 282 | 2021-10-02T04:54:45.110Z |
| 8304.666715 | 59.0 | 5.2 | 317 | 2021-10-02T16:54:45.111Z |
| 8812.514474 | 58.9 | 5.2 | 243 | 2021-10-03T04:54:45.113Z |
| 8527.830582 | 58.9 | 5.2 | 260 | 2021-10-03T16:54:45.115Z |
| 8718.500069 | 59.0 | 5.2 | 199 | 2021-10-04T04:54:45.113Z |
| 8289.857217 | 59.0 | 5.2 | 182 | 2021-10-04T16:54:45.110Z |
| 8577.156908 | 58.9 | 5.2 | 131 | 2021-10-05T04:54:45.116Z |
| 9363.976598 | 59.0 | 5.2 | 244 | 2021-10-05T16:54:45.117Z |
| 9066.404463 | 59.1 | 5.2 | 342 | 2021-10-06T04:54:45.125Z |
| 8333.741589 | 59.0 | 5.2 | 293 | 2021-10-06T16:54:45.142Z |
| 8669.321532 | 59.0 | 5.2 | 183 | 2021-10-07T04:54:45.126Z |
| 8897.241569 | 58.9 | 5.2 | 175 | 2021-10-07T16:54:45.122Z |
| 8586.605242 | 59.1 | 5.2 | 235 | 2021-10-08T04:54:45.124Z |
| 8648.847735 | 59.0 | 5.2 | 243 | 2021-10-08T16:54:45.132Z |
| 8903.71078 | 59.0 | 5.2 | 281 | 2021-10-09T04:54:45.140Z |
| 8710.135809 | 59.0 | 5.2 | 135 | 2021-10-09T16:54:45.126Z |
| 8845.737693 | 58.8 | 5.2 | 151 | 2021-10-10T04:54:45.138Z |
| 8383.064402 | 59.0 | 5.2 | 308 | 2021-10-10T16:54:45.126Z |
| 8474.41634 | 59.1 | 5.2 | 287 | 2021-10-11T04:54:45.141Z |
| 9334.535773 | 58.9 | 5.2 | 279 | 2021-10-11T16:54:45.147Z |
| 9259.244404 | 59.0 | 5.2 | 162 | 2021-10-12T04:54:45.135Z |
| 8539.275937 | 58.9 | 5.2 | 251 | 2021-10-12T16:54:45.130Z |
| 9693.861363 | 58.9 | 5.2 | 271 | 2021-10-13T04:54:45.129Z |
| 9341.00809 | 58.9 | 5.2 | 326 | 2021-10-13T16:54:45.127Z |
| 8821.763651 | 58.9 | 5.2 | 327 | 2021-10-14T04:54:45.148Z |
| 9172.972533 | 59.0 | 5.2 | 240 | 2021-10-14T16:54:45.283Z |
| 8395.166613 | 58.8 | 5.2 | 176 | 2021-10-15T04:54:45.139Z |
| 8759.741459 | 59.1 | 5.2 | 278 | 2021-10-15T16:54:45.131Z |
| 9085.061793 | 59.0 | 5.2 | 166 | 2021-10-16T04:54:45.131Z |
| | | | | |
| | | | | |

Device Node location: Sedona, AZ.

UUID#

2bba0732-9021-11ec-b909-0242ac120002



| AC Load | kWh | Data Usage (kb) | Energy Trades per Watt | Timestamp |
|-------------|------|-----------------|------------------------|--------------------------|
| 9341.523516 | 58.9 | 5.2 | 221 | 2021-10-16T16:54:45.132Z |
| 9457.565246 | 59.0 | 5.2 | 261 | 2021-10-17T04:54:45.129Z |
| 9515.165279 | 59.0 | 5.2 | 275 | 2021-10-17T16:54:45.131Z |
| 9308.455016 | 59.0 | 5.2 | 288 | 2021-10-18T04:54:45.133Z |
| 9513.554466 | 58.9 | 5.2 | 255 | 2021-10-18T16:54:45.132Z |
| 8902.869979 | 59.0 | 5.2 | 339 | 2021-10-19T04:54:45.131Z |
| 8896.972513 | 58.9 | 5.2 | 193 | 2021-10-19T16:54:45.137Z |
| 9574.883977 | 59.0 | 5.2 | 300 | 2021-10-20T04:54:45.139Z |
| 9090.498219 | 58.9 | 5.2 | 298 | 2021-10-20T16:54:45.135Z |
| 8812.773871 | 59.0 | 5.2 | 195 | 2021-10-21T04:54:45.149Z |
| 9054.614555 | 59.0 | 5.2 | 278 | 2021-10-21T16:54:45.142Z |
| 9477.085923 | 59.0 | 5.2 | 145 | 2021-10-22T04:54:45.137Z |
| 8403.371557 | 58.9 | 5.2 | 153 | 2021-10-22T16:54:45.135Z |
| 8942.140332 | 59.0 | 5.2 | 334 | 2021-10-23T04:54:45.136Z |
| 8508.573346 | 58.9 | 5.2 | 289 | 2021-10-23T16:54:45.151Z |
| 8600.590597 | 58.9 | 5.2 | 195 | 2021-10-24T04:54:45.152Z |
| 8412.750683 | 58.9 | 5.2 | 162 | 2021-10-24T16:54:45.145Z |
| 9094.366057 | 59.0 | 5.2 | 225 | 2021-10-25T04:54:45.148Z |
| 9328.489244 | 59.0 | 5.2 | 200 | 2021-10-25T16:54:45.144Z |
| 9531.900779 | 59.0 | 5.2 | 282 | 2021-10-26T04:54:45.157Z |
| 9136.23715 | 59.0 | 5.2 | 346 | 2021-10-26T16:54:45.146Z |
| 8967.49876 | 58.9 | 5.2 | 164 | 2021-10-27T04:54:45.168Z |
| 9006.593728 | 58.9 | 5.2 | 218 | 2021-10-27T16:54:45.163Z |
| 8777.112227 | 59.0 | 5.2 | 197 | 2021-10-28T04:54:45.153Z |
| 8362.463737 | 59.0 | 5.2 | 182 | 2021-10-28T16:54:45.159Z |
| 9434.368522 | 59.1 | 5.2 | 301 | 2021-10-29T04:54:45.156Z |
| 9378.627187 | 58.8 | 5.2 | 347 | 2021-10-29T16:54:45.218Z |
| 9361.09631 | 59.0 | 5.2 | 156 | 2021-10-30T04:54:45.169Z |
| 9465.067884 | 59.0 | 5.2 | 282 | 2021-10-30T16:54:45.176Z |
| 7845.525281 | 59.1 | 5.2 | 132 | 2021-10-31T04:54:45.229Z |
| 8967.052174 | 59.0 | 5.2 | 126 | 2021-10-31T16:54:45.223Z |
| | | | | |

| AC Load | kWh | Data Usage (kb) | Energy Trades per Watt | Timestamp |
|-------------|------|-----------------|------------------------|--------------------------|
| 9485.520139 | 59.0 | 5.2 | 150 | 2021-11-01T04:54:45.172Z |
| 8676.01101 | 59.1 | 5.2 | 227 | 2021-11-01T16:54:45.171Z |
| 8884.206174 | 59.0 | 5.2 | 337 | 2021-11-02T04:54:45.171Z |
| 9125.411012 | 59.1 | 5.2 | 260 | 2021-11-02T16:54:45.228Z |
| 8652.394869 | 59.1 | 5.2 | 288 | 2021-11-03T04:54:45.243Z |
| 9283.156655 | 58.9 | 5.2 | 346 | 2021-11-03T16:54:45.162Z |
| 8551.016773 | 58.9 | 5.2 | 215 | 2021-11-04T04:54:45.166Z |
| 8689.015794 | 59.0 | 5.2 | 186 | 2021-11-04T16:54:45.176Z |
| 8991.591251 | 58.8 | 5.2 | 175 | 2021-11-05T04:54:45.167Z |
| 9559.459887 | 59.0 | 5.2 | 153 | 2021-11-05T16:54:45.165Z |
| 8543.658823 | 58.9 | 5.2 | 146 | 2021-11-06T04:54:45.232Z |
| 8155.355882 | 59.1 | 5.2 | 222 | 2021-11-06T16:54:45.188Z |
| 8625.276547 | 59.0 | 5.2 | 151 | 2021-11-07T04:54:45.171Z |
| 8844.742548 | 59.0 | 5.2 | 240 | 2021-11-07T16:54:45.170Z |
| 8914.69634 | 59.0 | 5.2 | 165 | 2021-11-08T04:54:45.172Z |
| 9759.402675 | 59.0 | 5.2 | 331 | 2021-11-08T16:54:45.175Z |
| 8481.456177 | 59.1 | 5.2 | 313 | 2021-11-09T04:54:45.180Z |
| 8948.637411 | 59.0 | 5.2 | 306 | 2021-11-09T16:54:45.240Z |
| 8465.754945 | 58.9 | 5.2 | 349 | 2021-11-10T04:54:45.176Z |
| 9216.172702 | 59.0 | 5.2 | 198 | 2021-11-10T16:54:45.179Z |
| 9080.75759 | 58.9 | 5.2 | 143 | 2021-11-11T04:54:45.180Z |
| 9568.139767 | 58.9 | 5.2 | 192 | 2021-11-11T16:54:45.181Z |
| 9422.670062 | 58.9 | 5.2 | 260 | 2021-11-12T04:54:45.183Z |
| 8738.857885 | 59.1 | 5.2 | 338 | 2021-11-12T16:54:45.198Z |
| 9652.070863 | 59.0 | 5.2 | 241 | 2021-11-13T04:54:45.177Z |
| 8584.523101 | 59.0 | 5.2 | 186 | 2021-11-13T16:54:45.288Z |
| 9113.28817 | 58.9 | 5.2 | 170 | 2021-11-14T04:54:45.182Z |
| 9745.388509 | 59.0 | 5.2 | 208 | 2021-11-14T16:54:45.193Z |
| 8469.601647 | 58.9 | 5.2 | 288 | 2021-11-15T04:54:45.184Z |
| 9144.674993 | 59.0 | 5.2 | 345 | 2021-11-15T16:54:45.188Z |
| 8897.583932 | 59.1 | 5.2 | 337 | 2021-11-16T04:54:45.261Z |
| | | | | |

Device ID: 5491:5682

| AC Load | kWh | Data Usage (kb) | Energy Trades per Watt | Timestamp |
|-------------|------|-----------------|------------------------|--------------------------|
| 8684.477123 | 59 | 5.2 | 304 | 2021-11-16T16:54:45.186Z |
| 8269.132909 | 59 | 5.2 | 203 | 2021-11-17T04:54:45.247Z |
| 8430.85571 | 58.8 | 5.2 | 331 | 2021-11-17T16:54:45.194Z |
| 9285.068594 | 59 | 5.2 | 236 | 2021-11-18T04:54:45.188Z |
| 9303.203167 | 59 | 5.2 | 315 | 2021-11-18T16:54:45.264Z |
| 9192.814751 | 59 | 5.2 | 240 | 2021-11-19T04:54:45.249Z |
| 9369.492829 | 59 | 5.2 | 225 | 2021-11-19T16:54:45.198Z |
| 9163.559045 | 58.9 | 5.2 | 283 | 2021-11-20T04:54:45.201Z |
| 8708.755546 | 59 | 5.2 | 304 | 2021-11-20T16:54:45.191Z |
| 8683.794737 | 58.9 | 5.2 | 223 | 2021-11-21T04:54:45.228Z |
| 8724.412575 | 58.9 | 5.2 | 295 | 2021-11-21T16:54:45.198Z |
| 9077.089519 | 58.9 | 5.2 | 337 | 2021-11-22T04:54:45.209Z |
| 8943.549524 | 59 | 5.2 | 219 | 2021-11-22T16:54:45.195Z |
| 9636.629439 | 58.9 | 5.2 | 316 | 2021-11-23T04:54:45.196Z |
| 8545.410826 | 59 | 5.2 | 194 | 2021-11-23T16:54:45.212Z |
| 9059.069435 | 59 | 5.2 | 306 | 2021-11-24T04:54:45.211Z |
| 9073.064264 | 58.9 | 5.2 | 287 | 2021-11-24T16:54:45.212Z |
| 8596.492139 | 59 | 5.2 | 340 | 2021-11-25T04:54:45.205Z |
| 8715.15944 | 59 | 5.2 | 217 | 2021-11-25T16:54:45.204Z |
| 9261.551766 | 59 | 5.2 | 206 | 2021-11-26T04:54:45.203Z |
| 8834.356865 | 59 | 5.2 | 202 | 2021-11-26T16:54:45.201Z |
| 9144.849035 | 58.9 | 5.2 | 308 | 2021-11-27T04:54:45.205Z |
| 9464.550595 | 58.9 | 5.2 | 277 | 2021-11-27T16:54:45.206Z |
| 8927.927576 | 59 | 5.2 | 228 | 2021-11-28T04:54:45.205Z |
| 8862.710783 | 59 | 5.2 | 330 | 2021-11-28T16:54:45.205Z |
| 9841.126999 | 58.9 | 5.2 | 259 | 2021-11-29T04:54:45.202Z |
| 8959.213709 | 59 | 5.2 | 220 | 2021-11-29T16:54:45.206Z |
| 9132.975568 | 58.9 | 5.2 | 190 | 2021-11-30T04:54:45.206Z |
| 9121.069011 | 59 | 5.2 | 197 | 2021-11-30T16:54:45.231Z |
| 8955.044382 | 59 | 5.2 | 185 | 2021-12-01T04:54:45.216Z |
| 9538.542129 | 58.9 | 5.2 | 255 | 2021-12-01T16:54:45.208Z |
| | | | | |

| AC Load | kWh | Data Usage (kb) | Energy Trades per Watt | Timestamp |
|-------------|------|-----------------|------------------------|--------------------------|
| 8585.534503 | 59.1 | 5.2 | 345 | 2021-12-02T04:54:45.223Z |
| 8766.99798 | 59.0 | 5.2 | 221 | 2021-12-02T16:54:45.211Z |
| 8964.258224 | 58.9 | 5.2 | 261 | 2021-12-03T04:54:45.214Z |
| 9826.142887 | 59.0 | 5.2 | 275 | 2021-12-03T16:54:45.215Z |
| 9792.751945 | 59.1 | 5.2 | 288 | 2021-12-04T04:54:45.215Z |
| 8646.576715 | 59.0 | 5.2 | 255 | 2021-12-04T16:54:45.241Z |
| 9310.107386 | 59.0 | 5.2 | 339 | 2021-12-05T04:54:45.225Z |
| 8938.486557 | 58.9 | 5.2 | 193 | 2021-12-05T16:54:45.221Z |
| 8888.366561 | 59.2 | 5.2 | 300 | 2021-12-06T04:54:45.219Z |
| 8867.254839 | 58.9 | 5.2 | 298 | 2021-12-06T16:54:45.243Z |
| 8953.003736 | 58.9 | 5.2 | 298 | 2021-12-06T16:54:45.243Z |
| 8953.003736 | 59.0 | 5.2 | 195 | 2021-12-07T04:54:45.225Z |
| 9306.514071 | 59.0 | 5.2 | 278 | 2021-12-07T16:54:45.379Z |
| 8467.753387 | 59.0 | 5.2 | 145 | 2021-12-08T04:54:45.233Z |
| 8616.436681 | 59.0 | 5.2 | 153 | 2021-12-08T16:54:45.227Z |
| 8850.007475 | 59.0 | 5.2 | 334 | 2021-12-09T04:54:45.256Z |
| 9251.708623 | 59.0 | 5.2 | 289 | 2021-12-09T16:54:45.289Z |
| 9508.780844 | 58.9 | 5.2 | 195 | 2021-12-10T04:54:45.226Z |
| 9116.430189 | 59.1 | 5.2 | 162 | 2021-12-10T16:54:45.234Z |
| 8912.716832 | 59.0 | 5.2 | 225 | 2021-12-11T04:54:45.231Z |
| 8680.108734 | 58.9 | 5.2 | 200 | 2021-12-11T16:54:45.228Z |
| 8382.140075 | 58.9 | 5.2 | 282 | 2021-12-12T04:54:45.233Z |
| 9112.724716 | 58.9 | 5.2 | 282 | 2021-12-12T04:54:45.233Z |
| 9112.724716 | 59.0 | 5.2 | 346 | 2021-12-12T16:54:45.232Z |
| 9258.512358 | 59.0 | 5.2 | 164 | 2021-12-13T04:54:45.234Z |
| 8978.732989 | 58.8 | 5.2 | 218 | 2021-12-13T16:54:45.234Z |
| 8871.961938 | 59.0 | 5.2 | 197 | 2021-12-14T04:54:45.235Z |
| 8376.675143 | 59.0 | 5.2 | 182 | 2021-12-14T16:54:45.237Z |
| 8737.210126 | 59.0 | 5.2 | 301 | 2021-12-15T04:54:45.254Z |
| 9247.026232 | 59.0 | 5.2 | 347 | 2021-12-15T16:54:45.238Z |
| 9599.921329 | 58.9 | 5.2 | 156 | 2021-12-16T04:54:45.241Z |
| 9368.296581 | 59.0 | 5.2 | 156 | 2021-12-16T04:54:45.241Z |
| 9368.296581 | 58.9 | 5.2 | 282 | 2021-12-16T16:54:45.254Z |
| 8745.424435 | 58.9 | 5.2 | 132 | 2021-12-17T04:54:45.303Z |
| | | | | |

| AC Load | kWh | Data Usage (kb) | Energy Trades per Watt | Timestamp |
|-------------|------|-----------------|------------------------|--------------------------|
| 9734.562824 | 58.9 | 5.2 | 206 | 2021-12-17T16:54:45.245Z |
| 8941.711943 | 59.0 | 5.2 | 202 | 2021-12-18T04:54:45.258Z |
| 8816.917555 | 59.0 | 5.2 | 308 | 2021-12-18T16:54:45.246Z |
| 8140.515669 | 59.0 | 5.2 | 277 | 2021-12-19T04:54:45.249Z |
| 8590.655551 | 58.9 | 5.2 | 228 | 2021-12-19T16:54:45.260Z |
| 8989.248705 | 59.0 | 5.2 | 330 | 2021-12-20T04:54:45.249Z |
| 9154.670107 | 59.0 | 5.2 | 259 | 2021-12-20T16:54:45.248Z |
| 8559.775975 | 59.0 | 5.2 | 220 | 2021-12-21T04:54:45.249Z |
| 8691.769939 | 58.9 | 5.2 | 190 | 2021-12-21T16:54:45.251Z |
| 9272.307057 | 58.9 | 5.2 | 197 | 2021-12-22T04:54:45.254Z |
| 8505.21551 | 59.0 | 5.2 | 185 | 2021-12-22T16:54:45.321Z |
| 9054.032697 | 59.0 | 5.2 | 255 | 2021-12-23T04:54:45.256Z |
| 9610.883715 | 58.9 | 5.2 | 263 | 2021-12-23T16:54:45.322Z |
| 9052.8477 | 59.0 | 5.2 | 136 | 2021-12-24T04:54:45.265Z |
| 9066.961396 | 58.9 | 5.2 | 135 | 2021-12-24T16:54:45.260Z |
| 8877.534322 | 59.0 | 5.2 | 238 | 2021-12-25T04:54:45.264Z |
| 9089.897483 | 59.0 | 5.2 | 202 | 2021-12-25T16:54:45.262Z |
| 9115.262983 | 58.9 | 5.2 | 126 | 2021-12-26T04:54:45.275Z |
| 9123.829054 | 59.0 | 5.2 | 272 | 2021-12-26T16:54:45.276Z |
| 9612.243912 | 58.8 | 5.2 | 314 | 2021-12-27T04:54:45.274Z |
| 9527.327217 | 58.9 | 5.2 | 258 | 2021-12-27T16:54:45.261Z |
| 9257.117676 | 58.9 | 5.2 | 324 | 2021-12-28T04:54:45.328Z |
| 9224.208465 | 58.9 | 5.2 | 197 | 2021-12-28T16:54:45.279Z |
| 9241.036494 | 59.0 | 5.2 | 236 | 2021-12-29T04:54:45.325Z |
| 10115.98342 | 59.1 | 5.2 | 120 | 2021-12-29T16:54:45.274Z |
| 8772.472691 | 59.0 | 5.2 | 144 | 2021-12-30T04:54:45.274Z |
| 8202.311661 | 59.0 | 5.2 | 209 | 2021-12-30T16:54:45.271Z |
| 8743.867713 | 58.9 | 5.2 | 202 | 2021-12-31T04:54:45.268Z |
| 8991.995259 | 58.9 | 5.2 | 344 | 2021-12-31T16:54:45.289Z |
| 8355.388161 | 59.0 | 5.2 | 227 | 2022-01-01T04:54:45.270Z |
| 9433.861159 | 59.1 | 5.2 | 309 | 2022-01-01T16:54:45.280Z |
| | | | 316 | |
| | | | | |

| AC Load | kWh | Data Usage (kb) | Energy Trades per Watt | Timestamp |
|-------------|------|-----------------|------------------------|--------------------------|
| 8537.335136 | 59.0 | 5.2 | 304 | 2022-01-02T04:54:45.273Z |
| 9299.005301 | 58.9 | 5.2 | 203 | 2022-01-02T16:54:45.272Z |
| 8984.013316 | 58.9 | 5.2 | 331 | 2022-01-03T04:54:45.272Z |
| 8924.73767 | 58.9 | 5.2 | 236 | 2022-01-03T16:54:45.436Z |
| 9748.157249 | 58.9 | 5.2 | 315 | 2022-01-04T04:54:45.277Z |
| 9494.27589 | 59.0 | 5.2 | 240 | 2022-01-04T16:54:45.275Z |
| 8509.617717 | 59.1 | 5.2 | 225 | 2022-01-05T04:54:45.287Z |
| 8430.630555 | 58.9 | 5.2 | 283 | 2022-01-05T16:54:45.293Z |
| 9252.219295 | 59.0 | 5.2 | 304 | 2022-01-06T04:54:45.435Z |
| 8974.585957 | 59.0 | 5.2 | 223 | 2022-01-06T16:54:45.279Z |
| 9045.408751 | 58.9 | 5.2 | 295 | 2022-01-07T04:54:45.280Z |
| 9082.503986 | 58.9 | 5.2 | 337 | 2022-01-07T16:54:45.277Z |
| 8801.768409 | 58.9 | 5.2 | 219 | 2022-01-08T04:54:45.359Z |
| 9687.359999 | 59.1 | 5.2 | 316 | 2022-01-08T16:54:45.299Z |
| 9424.159901 | 59.0 | 5.2 | 194 | 2022-01-09T04:54:45.291Z |
| 8480.801743 | 58.9 | 5.2 | 306 | 2022-01-09T16:54:45.292Z |
| 9652.758 | 59.0 | 5.2 | 287 | 2022-01-10T04:54:45.288Z |
| 9537.262864 | 59.0 | 5.2 | 340 | 2022-01-10T16:54:45.294Z |
| 9416.616303 | 58.8 | 5.2 | 217 | 2022-01-11T04:54:45.294Z |
| 8754.671056 | 59.1 | 5.2 | 263 | 2022-01-11T16:54:45.298Z |
| 9966.170564 | 58.9 | 5.2 | 136 | 2022-01-12T04:54:45.301Z |
| 8771.248739 | 59.1 | 5.2 | 135 | 2022-01-12T16:54:45.310Z |
| 8684.084619 | 58.9 | 5.2 | 238 | 2022-01-13T04:54:45.299Z |
| 8854.31492 | 59.0 | 5.2 | 202 | 2022-01-13T16:54:45.294Z |
| 9025.07238 | 59.0 | 5.2 | 251 | 2022-01-14T04:54:45.301Z |
| 10504.72043 | 59.1 | 5.2 | 209 | 2022-01-14T16:54:45.323Z |
| 8689.751307 | 58.9 | 5.2 | 226 | 2022-01-15T04:54:45.304Z |
| 9054.83868 | 59.0 | 5.2 | 284 | 2022-01-15T16:54:45.305Z |
| 8683.016192 | 59.0 | 5.2 | 286 | 2022-01-16T04:54:45.308Z |
| 8935.882068 | 58.9 | 5.2 | 174 | 2022-01-16T16:54:45.305Z |
| 8629.598963 | 58.9 | 5.2 | 300 | 2022-01-17T04:54:45.309Z |
| | 58.1 | 5.2 | | |

| AC Load | kWh | Data Usage (kb) | Energy Trades per Watt | Timestamp |
|-------------|------|-----------------|------------------------|--------------------------|
| 8526.38509 | 59.0 | 5.2 | 141 | 2022-01-17T16:54:45.373Z |
| 9512.259592 | 59.0 | 5.2 | 335 | 2022-01-18T04:54:45.313Z |
| 8292.324473 | 59.1 | 5.2 | 285 | 2022-01-18T16:54:45.320Z |
| 8895.251116 | 58.9 | 5.2 | 255 | 2022-01-19T04:54:45.374Z |
| 8238.173112 | 59.0 | 5.2 | 278 | 2022-01-19T16:54:45.331Z |
| 9538.023617 | 59.0 | 5.2 | 179 | 2022-01-20T04:54:45.392Z |
| 9225.538232 | 58.9 | 5.2 | 231 | 2022-01-20T16:54:45.324Z |
| 8373.001465 | 58.8 | 5.2 | 223 | 2022-01-21T04:54:45.315Z |
| 9351.069083 | 59.1 | 5.2 | 193 | 2022-01-21T16:54:45.380Z |
| 8804.831931 | 58.9 | 5.2 | 298 | 2022-01-21T16:54:45.380Z |
| 8581.640899 | 59.0 | 5.2 | 298 | 2022-01-22T04:54:45.392Z |
| 8568.686669 | 58.9 | 5.2 | 248 | 2022-01-22T16:54:45.318Z |
| 8517.417759 | 58.9 | 5.2 | 221 | 2022-01-23T04:54:45.379Z |
| 8666.537606 | 59.0 | 5.2 | 302 | 2022-01-23T16:54:45.317Z |
| 9650.066899 | 59.0 | 5.2 | 255 | 2022-01-24T04:54:45.321Z |
| 8791.987261 | 59.0 | 5.2 | 333 | 2022-01-24T16:54:45.322Z |
| 9309.07055 | 59.0 | 5.2 | 162 | 2022-01-25T04:54:45.330Z |
| 8780.302274 | 59.0 | 5.2 | 212 | 2022-01-25T16:54:45.352Z |
| 8452.722589 | 59.0 | 5.2 | 264 | 2022-01-26T04:54:45.340Z |
| 8183.064375 | 58.9 | 5.2 | 214 | 2022-01-26T16:54:45.329Z |
| 9041.612549 | 58.9 | 5.2 | 210 | 2022-01-27T04:54:45.348Z |
| 8681.110584 | 58.9 | 5.2 | 203 | 2022-01-27T16:54:45.336Z |
| 8812.024723 | 59.0 | 5.2 | 287 | 2022-01-28T04:54:45.356Z |
| 8700.848748 | 58.9 | 5.2 | 134 | 2022-01-28T16:54:45.341Z |
| 8493.403632 | 58.9 | 5.2 | 163 | 2022-01-29T04:54:45.340Z |
| 8985.367888 | 58.9 | 5.2 | 229 | 2022-01-29T16:54:45.352Z |
| 9444.625301 | 59.0 | 5.2 | 241 | 2022-01-30T04:54:45.359Z |
| 9035.403461 | 59.1 | 5.2 | 280 | 2022-01-30T16:54:45.348Z |
| 8896.51541 | 58.9 | 5.2 | 205 | 2022-01-31T04:54:45.347Z |
| | 59.1 | 5.2 | 134 | 2022-01-31T16:54:45.358Z |
| | | | | |



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