



## **Senate Committee on Transportation**

### **VPPSA EV Rate Concept**

**February 29, 2024**

**Ken Nolan, General Manager**

# VPPSA Members



- **Barton Village**
- **The Village of Enosburg Falls**
- **Hardwick Electric Department**
- **Village of Jacksonville**
- **Village of Johnson**
- **Ludlow Electric Light Department**
- **Lyndon Electric Department**
- **Morrisville Water & Light**
- **Northfield Electric Department**
- **Village of Orleans**
- **Swanton Village**

# About VPPSA: Our Services



**Power Supply Purchasing and Generation**



**Financial Services**



**Rates and Planning**



**Legislative and Regulatory**



**IT Support and Technology Upgrades**



**Communication and Outreach**



**GIS and Field Services**



**Renewable Energy Standard**



**Key Accounts Program**

# VPPSA's Guiding Principles

**Affordability**

**Local Energy  
Democracy**



**Community  
is at the  
Heart of  
VPPSA.**

**Reliability**

**Sustainability  
& Growth**

# Background

- **Act 55 of 2021 established a requirement for all electric utilities to implement specialized electric vehicle rates by June 30, 2024.**
- **Following passage VPPSA began evaluating the most effective method for its member utilities to meet the requirement while honoring their core values.**
- **Also recognized the technology hurdles for small rural utilities serving some of the most energy burdened Vermont communities.**

# EV/EVSE Market & Flexible Load Management

Virtual Peaker 

**bellaWatt**

 **IPKeys**  
POWER PARTNERS

 **VT**

 EnergyHub

 *your* NEW HAMPSHIRE  
Electric Co-op

 open**ADR**  
ALLIANCE

 AutoGrid

 gm

 Ford

enel x

**GENERAC**  
GRID SERVICES

Efficiency  
Vermont

Drive  
Electric  
Vermont

**opconnect**  
A smarter, cleaner, greener future

  
Fermata  
Energy

 flo

**V.S.P.C.**  
Vermont System  
Planning Committee

 **ZEF ENERGY**

 ptimal  
Tech

**-chargepoint+**

# Findings

- **Vehicle and charger manufacturers view customer usage data as valuable**
  - Will not share without compensation
- **Software vendors typically price their fees on a per device basis**
  - Meaning that it is difficult to obtain economies of scale
- **Competition over “control” of flexible customer loads is fierce**
  - Entities are trying to extract value at all levels of the supply chain
- **As utilities VPPSA’s members need to find the path that brings the most value to their customers while promoting reliability and preserving consumer choices**

# VPPSA's Concept

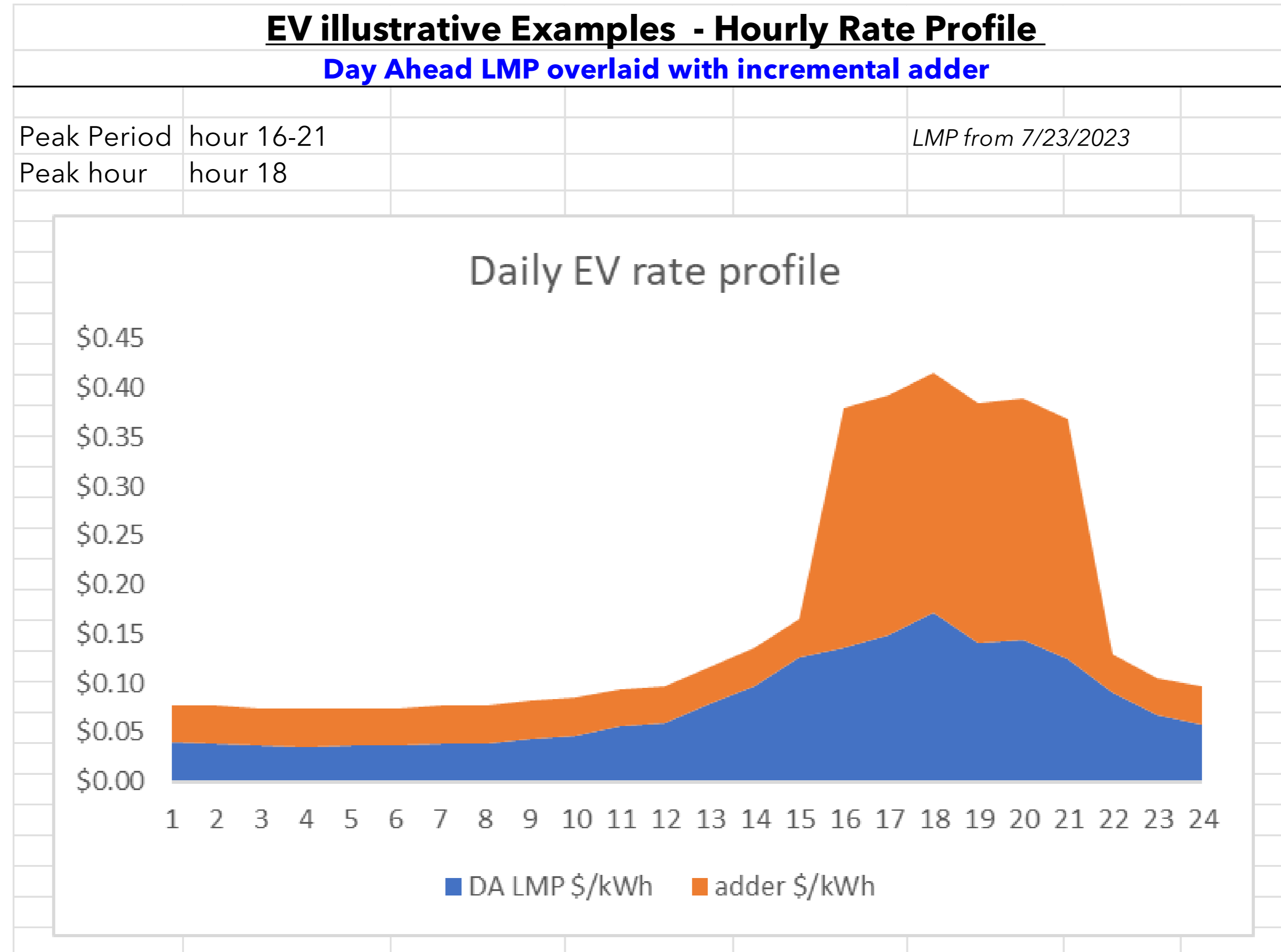
- **Create a standardized “Rider” that could be applied to all rate classes**
  - Ideally also applicable across all VPPSA member utilities
- **Allow consumers to make their own choices**
  - No utility command and control
- **Allow consumers to participate directly**
  - Or through their manufacturer or an aggregator
- **Develop a structure that is extendable to other appliances**



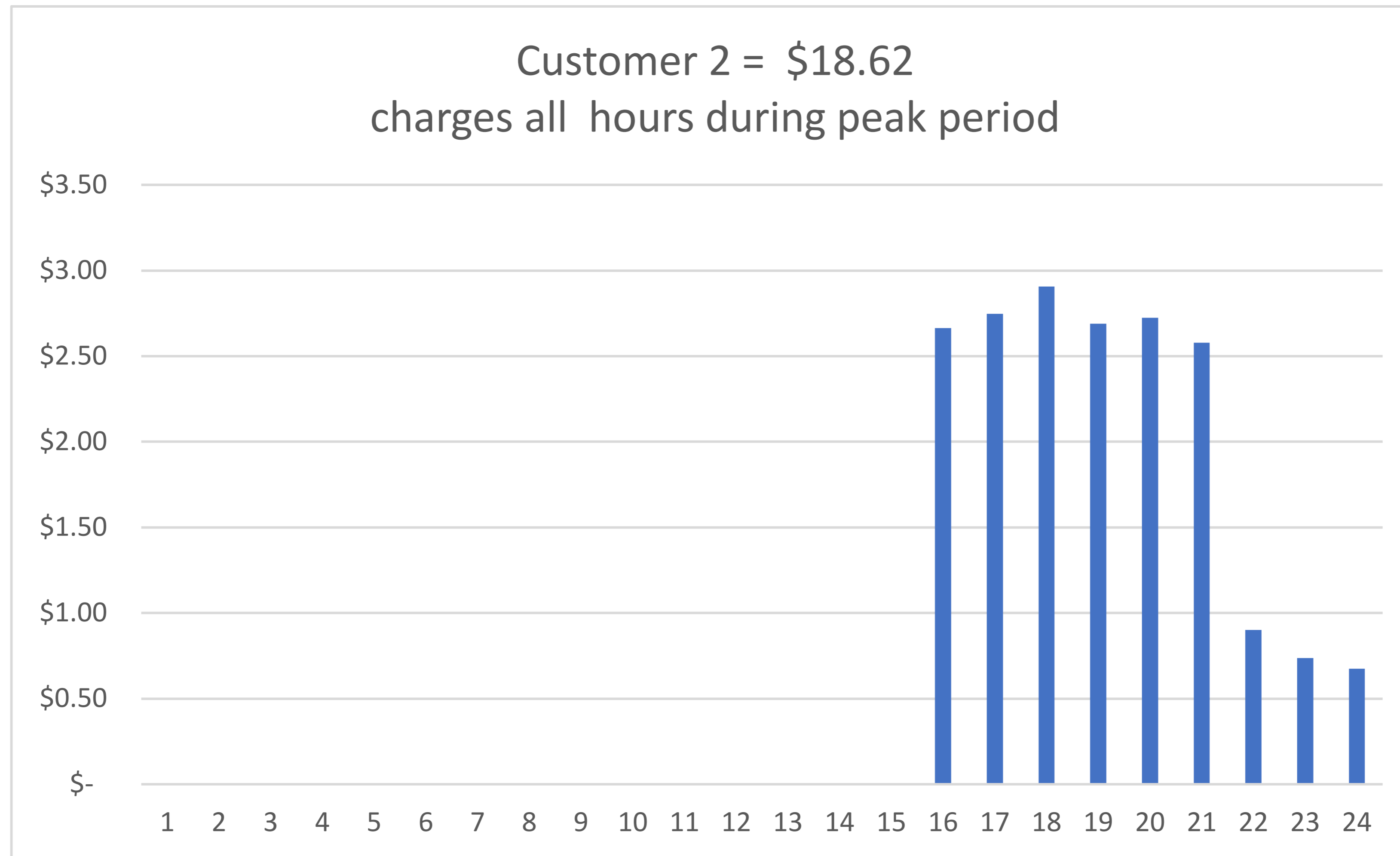
# The Specifics

- **Partnering with Bellawatt**
  - The firm that designed New Hampshire Electric Coops transactive energy program and has designed similar programs across the country
- **Customers will register their EV (or charger) in the Bellawatt software**
  - Using OpenADR – think of a Bluetooth connection
- **Customers will receive an hourly price from VPPSA each day, for the next day**
  - Based on the ISO New England Day Ahead hourly price plus adders for capacity and transmission costs
- **Bellawatt will record actual hourly usage and apply the hourly rate to develop the customer's cost for the EV charging.**
  - Because this is a sub-meter the customer's normal retail rate will also be applied to the usage to determine a credit
- **The retail rate credit will be subtracted from the EV charging cost to develop a net charge (or credit) that will be reflected on the customer's normal utility bill**

# Example - The EV Rate



# Example - Customer Charges Primarily On-Peak



# Example - Customer charges Partially On-Peak

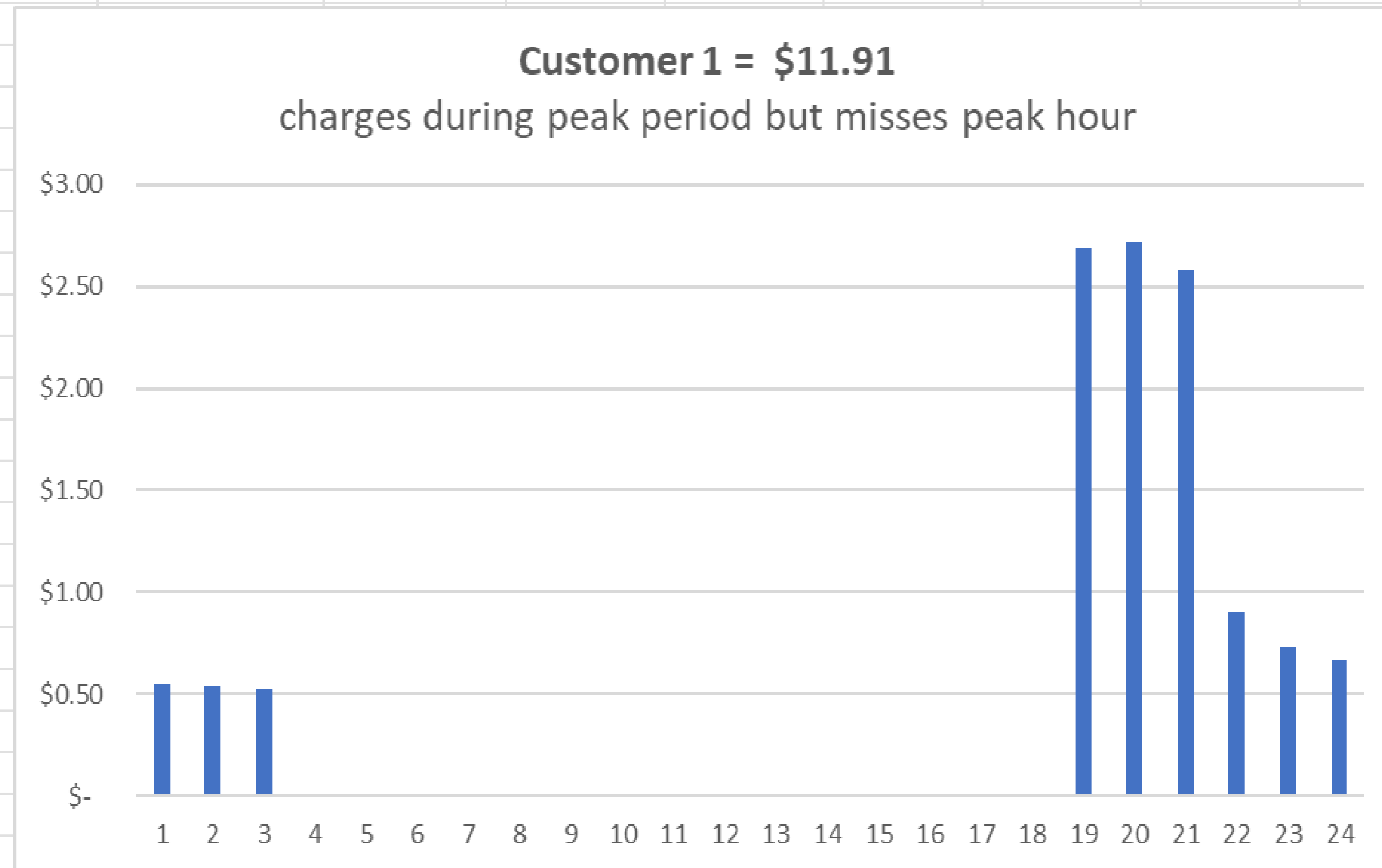
## EV illustrative Examples - Sample customers

### Three Customers -different Daily charging schedules

L2 charger 7.2 kw

Peak Period hour 16-21

Peak hour hour 18



# Example - Customer Avoids the On-Peak Period

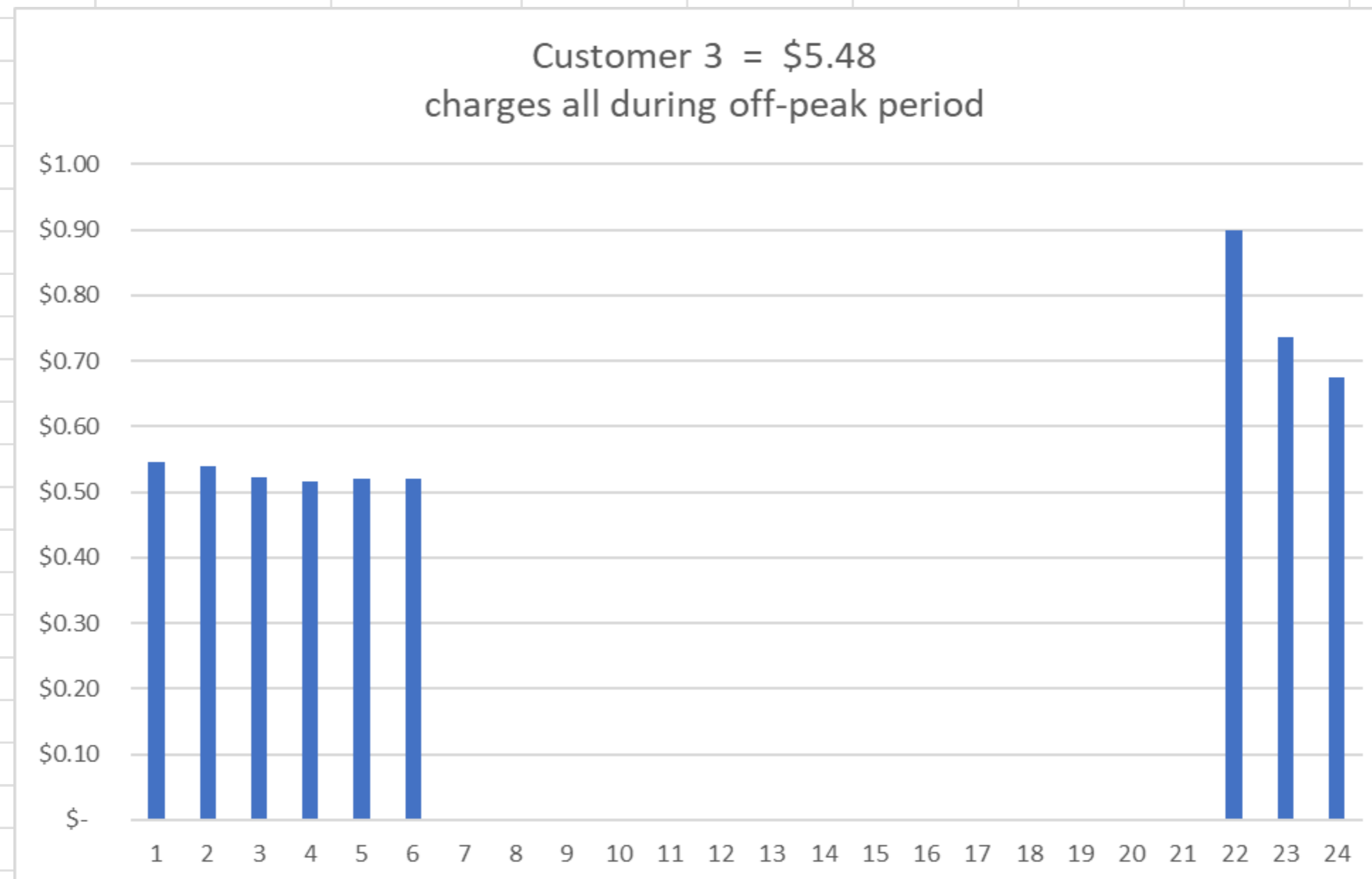
## EV illustrative Examples - Sample customers

### Three Customers -different Daily charging schedules

L2 charger 7.2 kw

Peak Period hour 16-21

Peak hour hour 18



# Why is This Unique?

- **VPPSA is not proposing to control customer devices**
  - VPPSA does not believe having utilities controlling thousands of customer-based appliances provides the most reliable grid in the long term
- **Vendor exposure will be minimized**
  - VPPSA will own the software and not be subject to vendor per device charges
  - The program will utilize opensource communications protocols minimizing exposure to vendor proprietary software
  - The costs/risks of participation will be held primarily by those receiving benefit
- **The system will allow the customer to choose how to participate**
  - Customers can manage their devices directly
  - They can also work with aggregators or manufacturers as intermediaries
- **VPPSA believes this same structure is extensible to other appliances, batteries, and generators**

# Status

- **VPPSA has filed its proposal with the PUC and evaluation is currently underway**
  - Case 23-3604-PET
  - Because this approach differs from other utility proposals and requires investment VPPSA desires PUC acceptance before proceeding
- **Bellawatt has simultaneously been engaged**
  - To develop the detailed software specifications
  - To identify methods for integrating the software with member utility billing systems
- **Several VPPSA members are also evaluating upgrading their billing/financial systems**
  - To better position for future technology integrations

# Contact Info

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***Putting the Public in Power.***

**[www.vppsa.com](http://www.vppsa.com)**

**Community is at the Heart of VPPSA.**