

Community Power Coalition:

Financing & Developing NH's Energy Economy

2023 NHGFOA Annual Conference | Friday May 5 | 11:15am – 12:15pm

FOR COMMUNITIES, BY COMMUNITIES.



**COMMUNITY
POWER COALITION**
OF NEW HAMPSHIRE

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2 | How to Finance NH's Energy Future (14-24)

- ⚡ Create Joint Powers Agency w/ Liability Protections for Member Towns

- ⚡ Empower JPA w/ Financing Authorities (e.g., Revenue Bonding)

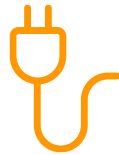
- ⚡ Finance & Develop a Portfolio of Energy Projects | Reduce & Manage Load!

3 | Power Agency vs. Broker Model (25-29)

4 | Questions & Discussion (30)

What is Community Power?

New Hampshire cities, towns, and counties can become **default electricity provider** for their residents + businesses and provide related services.



Pooled Purchasing Power
for **Energy Supply**

Utility Company
Delivers Power

Communities Benefit from
Value Added Services & Programs

Economies of Scale

Grid Reliability

Lower Rates & Product Choices

[RSA 53-E, Relative to Aggregation of Electric Customers by Municipalities & Counties](#)

Customers may switch back to utility default supply or take service from a Competitive Supplier

Community Power programs must be paid for out of revenues received from participating customers

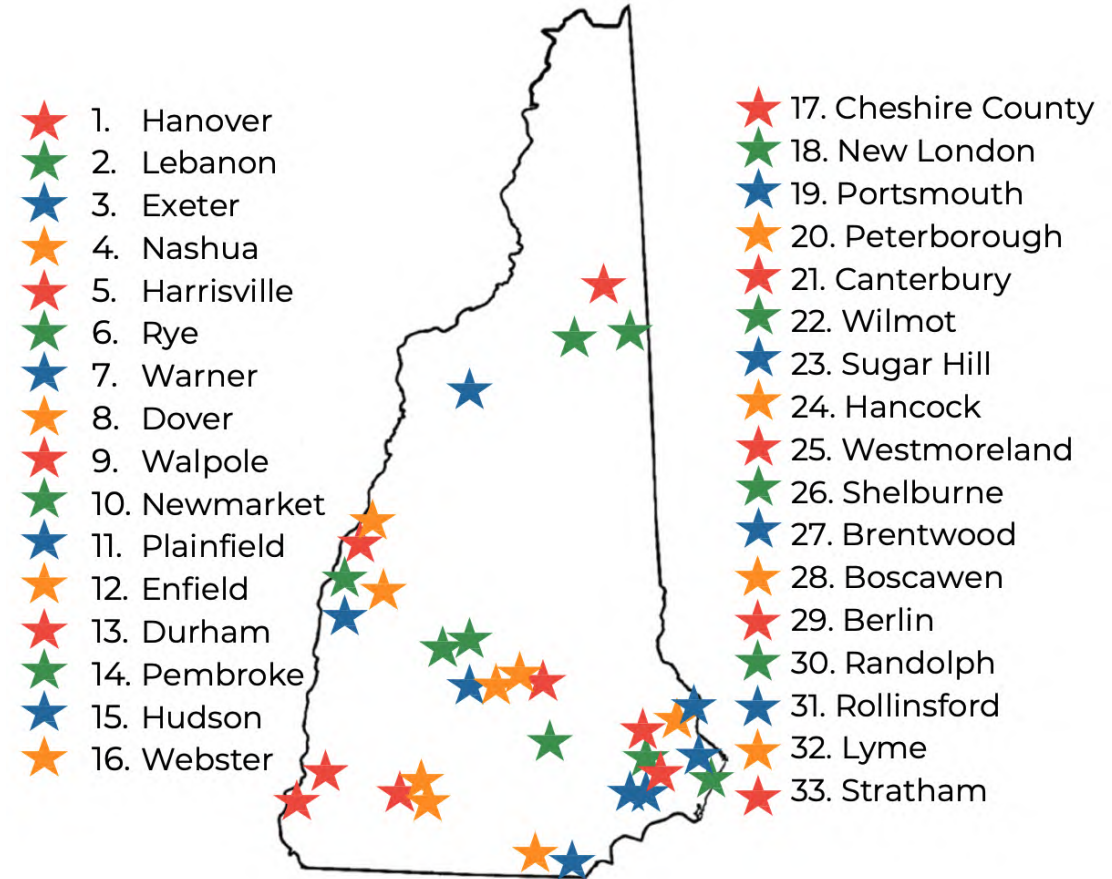
Community Power Coalition of New Hampshire

Community-governed power supplier — launching 12 Community Power programs Spring 2023

Our Mission

To foster resilient New Hampshire communities by empowering them to realize their energy goals.

- ⚡ Nonprofit Joint Power Agency formed 10/1/21
- ⚡ **33 Members | 23% of NH population**
- ⚡ 12 of 33 Members launching **2023**
 - ~75,000 customers
 - ~400,000 MWh in 2023 (MAY – DEC)
 - ~\$51 million 2023 revenues (controlled by communities)
- ⚡ Remaining & new Members to launch 2024+



All New Hampshire cities, towns, and counties are invited to join the Coalition.

Power Agency Design Process (2019-2022)

3+ years of adapting national best-practices to design a Joint Powers Agency for NH Communities

Public Power Industry Experience

- 70+ joint power agencies formed over the past ~60 years
- Provide power & services for many of the more than 2,000 municipal electric utilities across USA



Coalition Design Goals

- Robust & democratic governance & oversight structure
- Economies of scale for services + procurement
- Risk management of a portfolio of power supply contracts
- Advanced retail customer services (new services & choices)
- Proven model for new project development & local programs
- Team of professional staff & advisors manage power agency
- Joint public advocacy to improve state energy policy



Coalition: Designed to Achieve Local Policy Goals

Launching our own power supplier provides scale, financial stability, unbiased professional oversight & services to achieve local policy goals year-after-year (while shielding taxpayers from any liabilities incurred by power agency)



Joint & Local Control

- Collective due diligence
- Vetting energy suppliers
- Informed, collaborative decision-making
- Member choices



Lower Costs, Stable Rates

- Market timing
- Economies of scale
- Financial reserves
- Expert risk management
- Portfolio of energy contracts



Local Projects & Programs

- Utility partnerships & local infrastructure
- Community-scale solar + storage
- Proven model to build local projects & deploy customer programs



Commercial Innovation

- Industry-leading software
- New rates and products, e.g. TOU, TE, & Demand Response
- Expanded customer choice



Equity & Economic Development

- Control over ratesetting
- Voice in policy-making
- Community investments
- Increased resiliency



Clifton Below
Lebanon
Assistant Mayor



Kim Quirk
Enfield
Energy Cmte



Kevin Charette
Portsmouth
Energy Advisory Cmte



Evan Oxenham
Plainfield
Energy Cmte.

Board of Directors:

Community Governance

Local elected officials, former utility executives, energy finance & development professionals, municipal managers, teachers, & much more.



Kathleen Kelley
Randolph
AVEC



Clyde Carson
Warner
Finance Director



Andrew Hodson
Harrisville
Select Board



Lisa Sweet
Rye
Energy Cmte.



Paul Looney
Walpole
Community Power Cmte.



Joseph Lamattina
Newmarket
Town Council



Jackson Kaspari
Dover
Resilience Manager



April Salas
Hanover
Sustainability Dir.



Matt Miller
Pembroke
Energy Cmte



Bruce Tucker
Peterborough
Energy Cmte.



Doria Brown
Nashua
Energy Manager



Terry Clark
Cheshire County
Commissioner



Jamie Hess
New London
Energy Cmte.



Nick Devonshire
Exeter
Energy Cmte.



David Hemenway
Webster
Select Board



Steve Holmgren
Durham
Energy Cmte.

Chief Executive Officer: Brian Callnan

- ⚡ Mr. Callnan was selected as most uniquely qualified candidate from **nationally competitive search**.
- ⚡ Former Vice President of Power Resources & Access at NH Electric Co-op
 - Managed portfolio of wholesale power contracts to consistently deliver lower rates than investor-owned utilities.
 - Led Co-op's "**virtual power plants**" program, harnessing **home batteries** & **electric vehicles** to lower customer power costs.
- ⚡ Previously Director of Power Supply and Transmission at Vermont Public Power Supply Authority



Power Agency Operations:

Industry Expert Advisors & Service Providers

CPCNH is operated by a team of industry-leading advisors and professional service providers experienced in launching and operating Community Power Agencies.

Energy Hedging, Planning &
Portfolio Risk Management



ISO-NE Market Participant
+ Retail Customer Services



Member Services &
Public Engagement



General Counsel &
Legal Services



Start-up Consultants



HERNDON
ENTERPRISES

Revenue Controls &
Accounting Services



Org Chart

Citizens of New Hampshire

Wave 1
Members

Plainfield Community Power

Peterborough Community Power

Hanover Community Power

Canterbury Community Power

Exeter Community Power

Harrisville Community Power

Walpole Community Power

Portsmouth Community Power

Rye Community Power

Lebanon Community Power

Nashua Community Power

Enfield Community Power

Wave 2
Members

Brentwood, Boscawen, Canterbury, Durham, Dover, Hancock, Hudson, Lyme, New London, Newmarket,
Pembroke, Rollinsford, Shelburne, Stratham, Sugar Hill, Webster, Warner, Westmoreland, Wilmot



General Counsel & NH Legal Advice



Michael Postar, Esq.
DWGP, P.C.



Eli Emerson, Esq.
Primmer Piper

Consultants (until staff hired)



Samuel Golding
Community Choice Partners



Henry Herndon
Herndon Enterprises

POWER AGENCY OPERATIONS

Revenue Custodian

Load Serving Entity | Retail Customer Services

Supply Portfolio Risk Management

Community & Media Support



Streamlined CPA Program Implementation

Step-by-step plans, custom logos & websites, FAQs & community outreach materials (etc.)

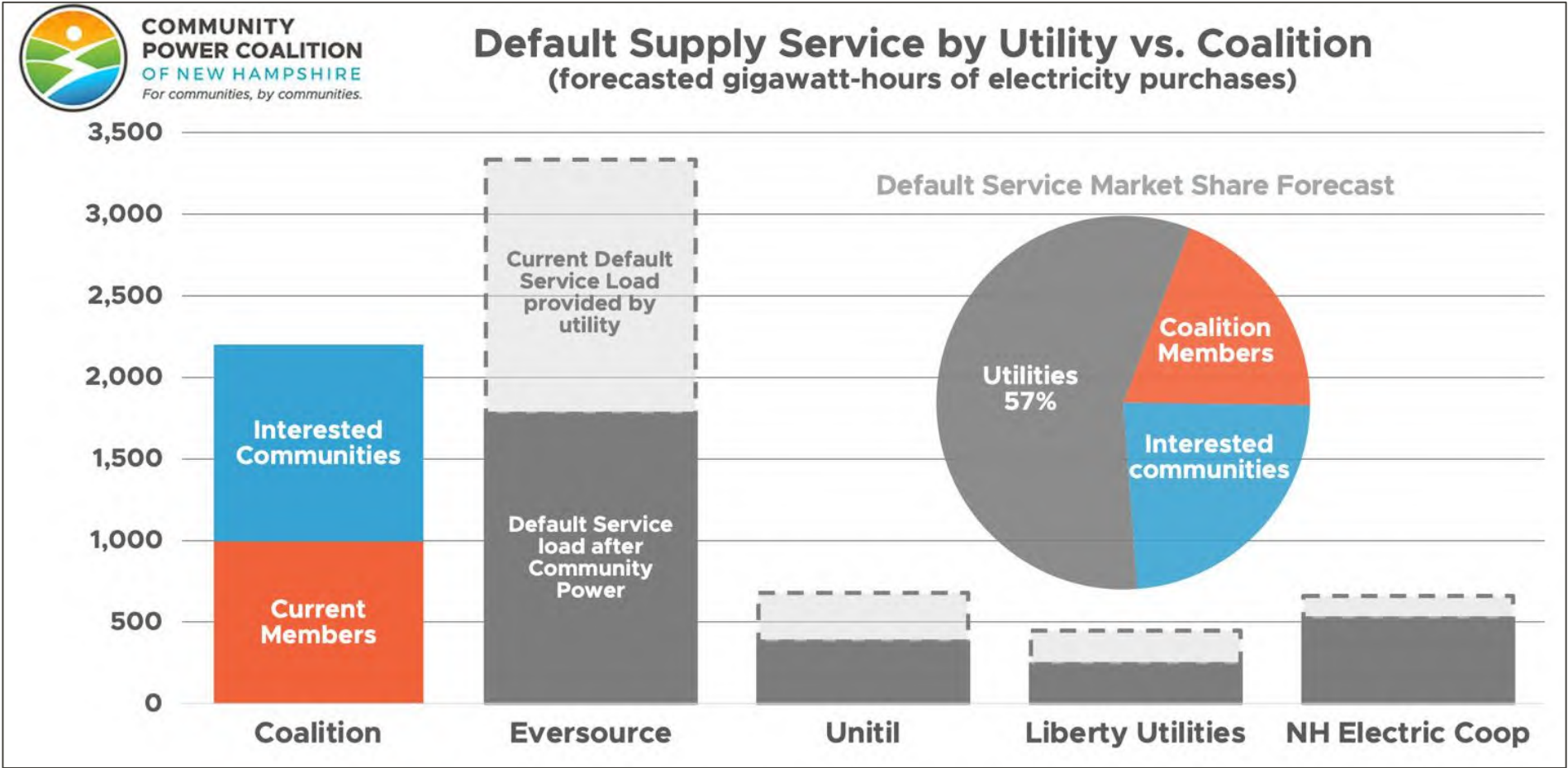
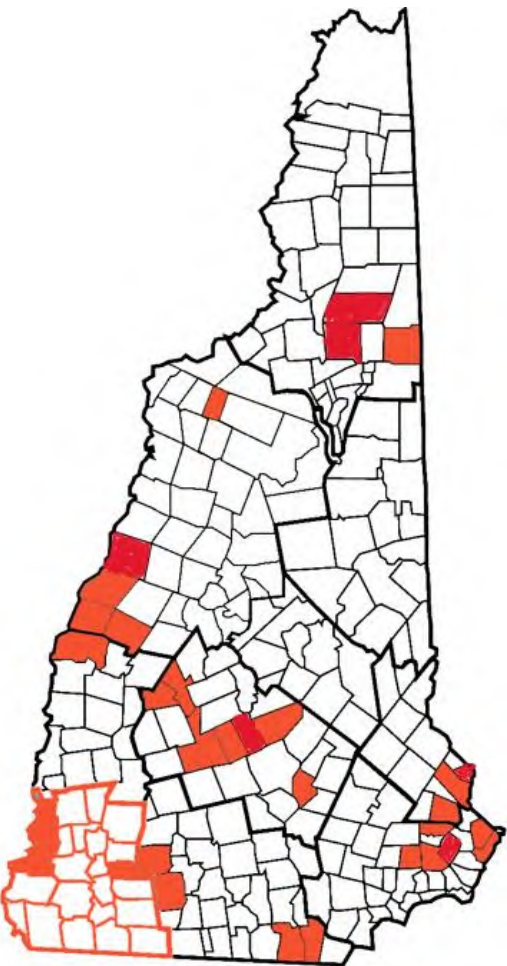


www.CommunityPowerNH.gov

Membership Growth

Membership has doubled over the past year, to **33 members**, and **40+** are interested in joining.

Current Members



The Coalition is poised to become the single largest electricity supplier in NH!

How to Bring Community Power to Your Town

Join the Coalition → Bring a Plan to Town Meeting → Launch!

❑ 1. Join Coalition “Joint Powers Agency” — Governed by Members

- ❑ Membership by Select Board vote to adopt Joint Powers Agreement (JPA)
- ❑ JPA is the contract among Members & By-laws

❑ 2. Establish an “Electric Aggregation Committee” (EAC) to;

- ❑ Prepare an “Electric Aggregation Plan” (EAP);
- ❑ Hold two public hearings on that EAP in advance of;
- ❑ Bringing the EAP to Town Meeting for voter adoption;

❑ 3. Contract for Services and Launch Community Power!

- ❑ Town Meeting adoption of an EAP authorizes (but does not require) the Select Board to contract for services to finance, launch, and operate Community Power.

How to Finance NH's Energy Future

1. Create Joint Powers Agency w/ Liability Protections
2. Build Financial Reserves – Community “Equity” in CPCNH
3. Empower JPA w/ Contracting, Financing & Revenue Bonding Authorities
4. Develop a Portfolio of Projects | Reduce & Manage Load!



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POWER COALITION**
OF NEW HAMPSHIRE
For communities, by communities.

Joint Powers Agreement & Liability Protections

- ⚡ JPA is a contract among municipal and county members establishing the Agency
 - CPCNH's financial liabilities & obligations are “firewalled” from municipal general funds
- ⚡ Includes Articles of Agreement and By-Laws (purpose & structure; voting rights; Director & Officer elections; provisions of cost sharing; oversight committees; financial & operational risk management compliance audits; limitations of liability; insurance; ...)
- ⚡ Adopting JPA & joining CPCNH provides access to expertise and resources **at no cost**
 - JPA Article XII, Limitation on Liability of Members
 - No “hard” commitment until Cost Sharing Agreement + Energy Risk Management, Rates & Reserves policies are subsequently approved by governing body (which authorizes CPCNH to procure supply)
- ⚡ **Process:** vote of governing body approves the JPA for execution & designates Member Representatives → CPCNH Board votes to admit new Member

JPA available for download at www.cpcnh.org/about under “Key Documents”

Project Financing Mechanisms

⚡ Active Portfolio Management of Wholesale Power Contracts

- Competitive solicitations w/ ISO-New England wholesale market participants
- Internal Bilateral Transactions (IBTs) w/ multiple counter parties
- Power Purchase Agreements

⚡ **JPA Article XI, Bonds and Notes**, CPCNH empowered to issue, sell and deliver bonds, subject to municipal participant local approval process in accordance with...

- **NH RSA 33-B, Municipal Revenue Bonds**
- RSA 53-E, Municipal & County Aggregation of Electric Customers
- RSA 53-F, Energy Efficiency & Clean Energy Districts
- **RSA 374-D, Municipal Small Scale Power Facility Bonds**
...for purpose of acquiring, financing, performing or constructing Projects.

A “**Project**” could be a power generator, battery, “virtual power plant,” etc., etc.

California Has Proven the Model, Financing Vast Amount of Clean Energy Developments.

CPCNH designed in part based on success of Community Power JPAs in California financing/developing huge amounts of local clean energy.



6,117 Megawatts
New Solar Panels

1,044 Megawatts
New Wind Turbines

2,646 Megawatts
New Energy Storage

14 Megawatts
New Geothermal

7 Megawatts
New Biogas

CPCNH Board Draft Budget - 2023

Cash Funds Budget with Actual and Projected Accrued Revenue & Expenses

Projected = indicative estimates

	BUDGET TOTALS		
	CY 2021	CY 2022	CY 2023
FUND BALANCE (End of Period)	\$35,005	\$36,684	\$12,419,786
REVENUES	\$35,005	\$265,975	\$51,263,229
Donations	\$35,005	\$35,975	\$600
Grant - NHCF		\$80,000	\$0
Calpine Startup Funding		\$150,000	\$600,000
Customer Revenues, P50 400MWh in 2023			\$55,246,369
Hedging			-\$4,583,740
EXPENSES	\$0	\$264,296	\$38,880,127
ENERGY OPERATIONAL COSTS:			
ISO Settlement			\$27,271,255
Non-Energy Costs			\$7,868,257
Utility Fees			\$38,487
Ascend			\$784,026
Calpine			\$549,790
LSE			\$33,750
DEFERRED COMP SCHEDULE			\$485,905

CPCNH Budget

Adopted 4/21/23

Net revenues from power supply sales capitalize **community reserve funds**.

- ⚡ \$12.4 Million forecasted for 2023
- ⚡ Reserves (1) protect customers from winter/summer price spikes; (2) enable financing of energy projects

Technical Assessment Priorities:

1. Expansion of CPCNH Membership
2. Develop local projects

These two priorities “generate significant surplus revenues and benefits for participating customers, communities and the Joint Powers Agency.”

Please join us!

Local Project Context

Federal incentives + NH SB 321 pilot framework enables cost-effective local projects for Coalition

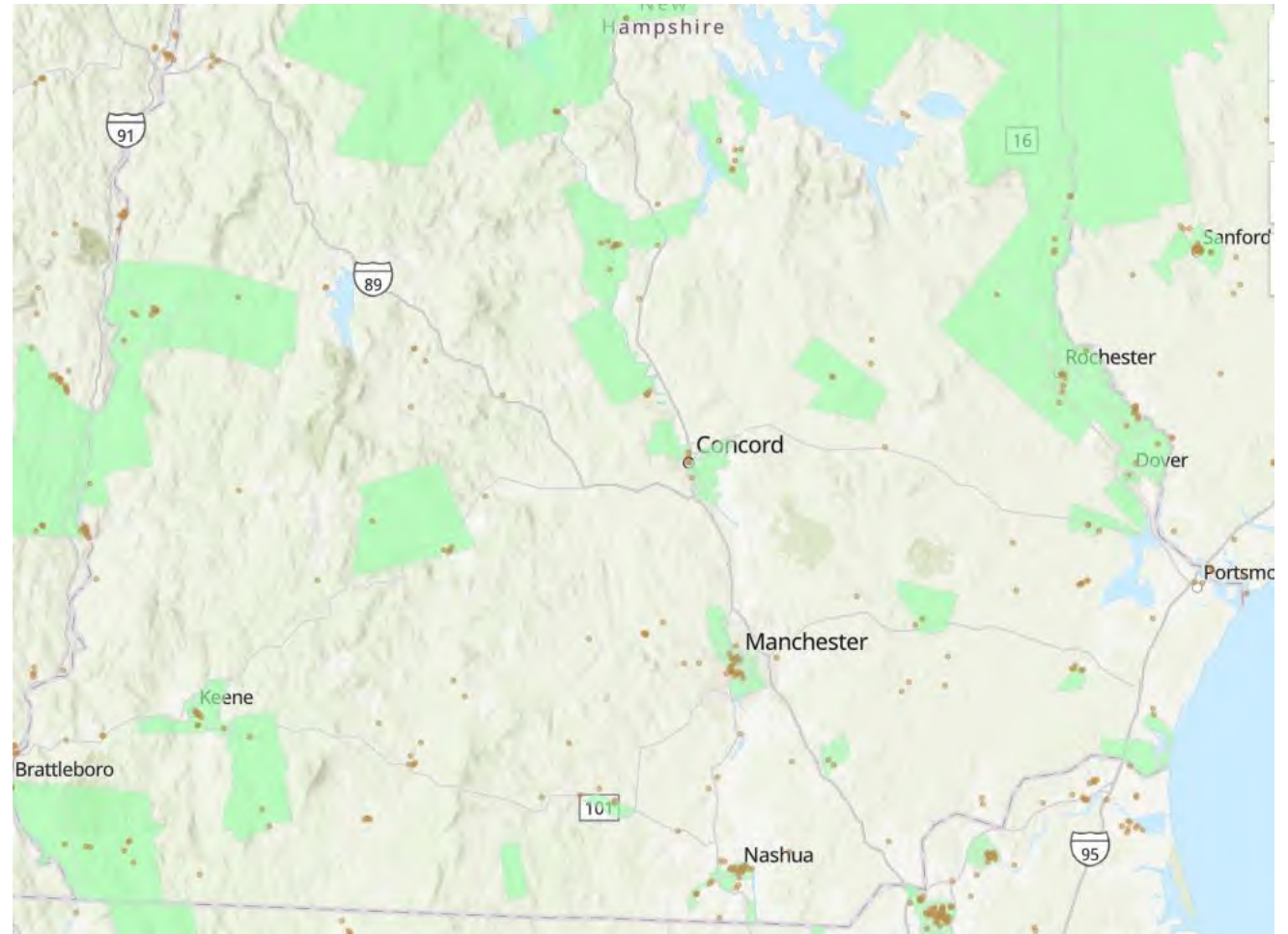
Inflation Reduction Act of 2022 (IRA)

- ⚡ Provides investment tax credit OR direct payment (e.g., for CPAs) for RE / storage
- ⚡ **<5 MW** installed in low-income zones can include interconnection costs
- ⚡ Incentives = up to 50% of cost
 - 30% baseline incentive
 - +10% bonus brownfield / low income
 - +10% bonus low-income <5 MW

NH Senate Bill 321 (2022) + SB 166 (2023)

- ⚡ Pilots market-based contract framework to pay projects full value for energy, capacity & transmission reduction impact
- ⚡ Worth \geq \$200/MWh (av.) for CPAs that contract for local projects
- ⚡ Allows up to 8 MW pilot projects (2 MW per utility territory)
- ⚡ Requires CPA + utility proposal to PUC

Low Income and Brownfield Sites (Eligible for additional incentive tax credit under IRA)



Local Project Modeling Results

The Coalition can build new local projects for 30%+ less cost than purchasing market power (!)

- Base Case assumes 2 MW net (revenues increase by ~\$350k to \$515k/ year)
- 8 MW scenario: \$2.8MM/ year increased net revenues
- Projects generate millions of extra \$\$\$ each year (strong competitive advantage)
- Strategic objective: empower Members & Legislative to lift 8 MW cap & develop the local energy market across NH!



Figure 33: Base Case Local Projects

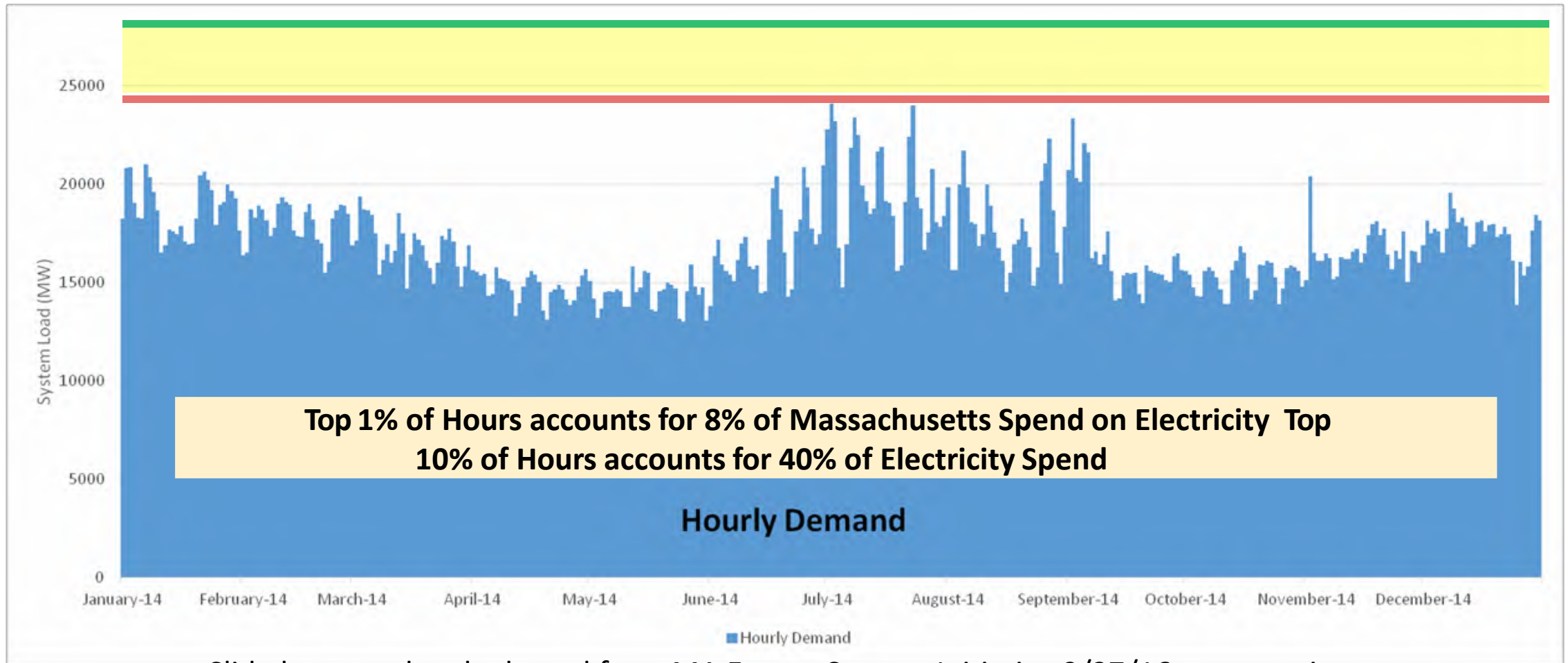
Month	2023	2024	2025	2026	2027	2028
Local Projects Revenue (Cost Reduction) (\$/MWh)	\$0.22	\$0.31	\$0.27	\$0.23	\$0.26	\$0.25
Market Energy Value	\$0.69	\$0.61	\$0.34	\$0.28	\$0.30	\$0.29
Renewable Energy Credit Value	\$0.27	\$0.22	\$0.19	\$0.15	\$0.12	\$0.10
Capacity Credit Value	\$0.00	\$0.02	\$0.03	\$0.04	\$0.05	\$0.06
Transmission Credit Value	\$0.19	\$0.25	\$0.23	\$0.23	\$0.24	\$0.27
PPA Cost	\$0.94	\$0.79	\$0.52	\$0.47	\$0.45	\$0.47
Local Projects Revenue (Cost Reduction)	\$84,623	\$352,946	\$474,806	\$455,621	\$515,615	\$483,448
Market Energy Value	\$264,618	\$687,343	\$598,160	\$553,691	\$595,280	\$559,549
Renewable Energy Credit Value	\$104,483	\$247,127	\$331,566	\$295,205	\$244,247	\$194,443
Capacity Credit Value	\$0	\$19,825	\$54,610	\$80,054	\$103,694	\$121,669
Transmission Credit Value	\$73,750	\$286,740	\$412,906	\$445,938	\$481,613	\$520,142
PPA Cost	\$358,229	\$888,090	\$922,435	\$919,266	\$909,219	\$912,355

Figure 34: 8 MW Scenario Local Projects

Month	2023	2024	2025	2026	2027	2028
Local Projects Revenue (Cost Reduction) (\$/MWh)	\$0.22	\$0.94	\$1.26	\$1.21	\$1.34	\$1.42
Market Energy Value	\$0.69	\$0.80	\$0.63	\$0.53	\$0.56	\$0.55
Renewable Energy Credit Value	\$0.27	\$0.30	\$0.34	\$0.26	\$0.21	\$0.18
Capacity Credit Value	\$0.00	\$0.02	\$0.10	\$0.16	\$0.21	\$0.25
Transmission Credit Value	\$0.19	\$0.76	\$0.94	\$0.91	\$0.96	\$1.07
PPA Cost	\$0.94	\$0.94	\$0.74	\$0.66	\$0.61	\$0.63
Local Projects Revenue (Cost Reduction)	\$84,623	\$1,056,271	\$2,224,554	\$2,379,095	\$2,680,109	\$2,758,333
Market Energy Value	\$264,618	\$895,273	\$1,116,544	\$1,047,641	\$1,129,771	\$1,074,955
Renewable Energy Credit Value	\$104,483	\$338,562	\$594,512	\$519,389	\$430,684	\$343,598
Capacity Credit Value	\$0	\$19,825	\$175,959	\$320,217	\$414,774	\$486,675
Transmission Credit Value	\$73,750	\$860,220	\$1,651,622	\$1,783,752	\$1,926,452	\$2,080,569
PPA Cost	\$358,229	\$1,057,609	\$1,314,084	\$1,291,904	\$1,221,574	\$1,227,462

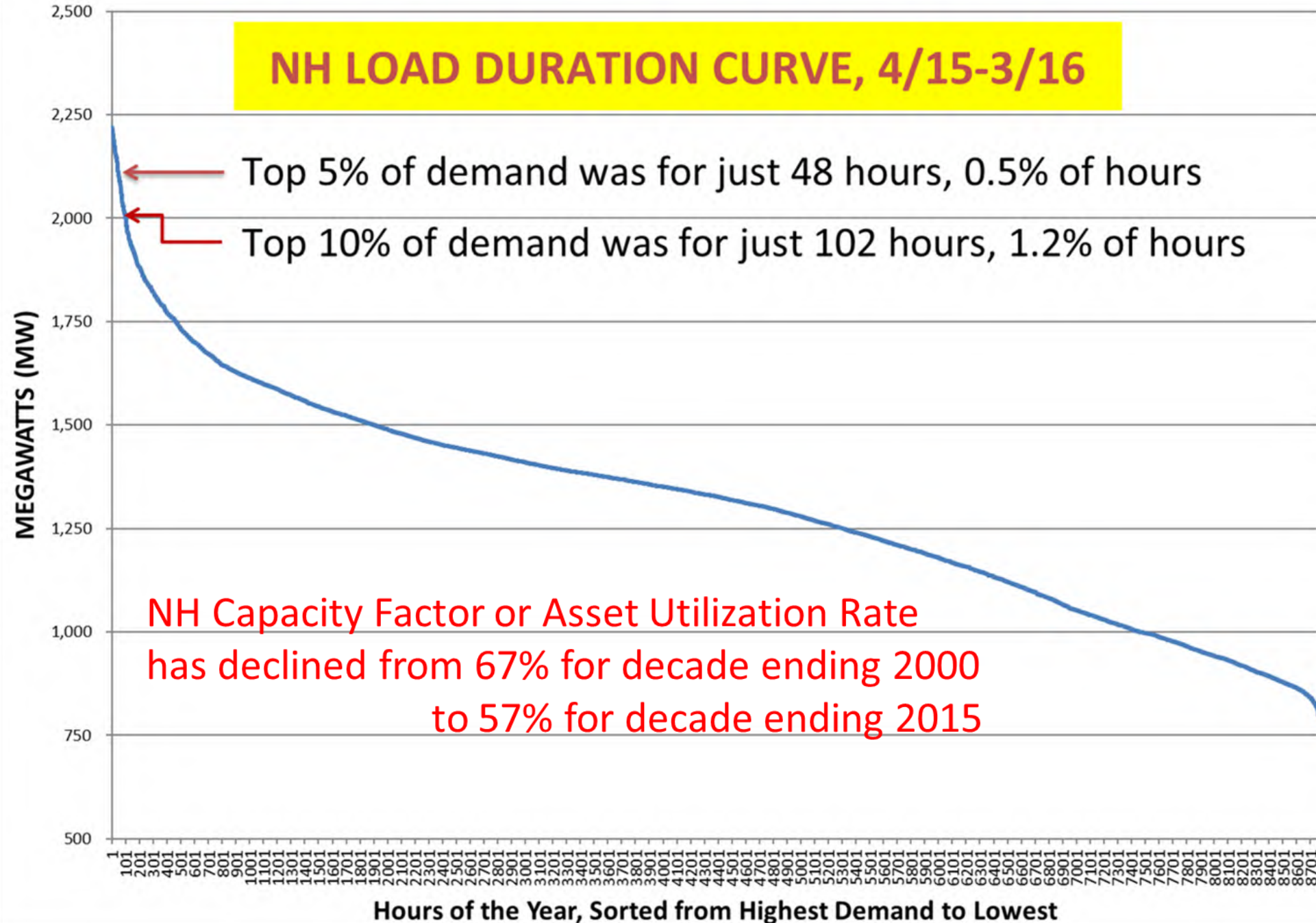
Electric Grid is Sized for Highest Hour of Demand

Whole Energy System (T, D & G) Sized to Meet Peak Demand, With a **Safety Margin**



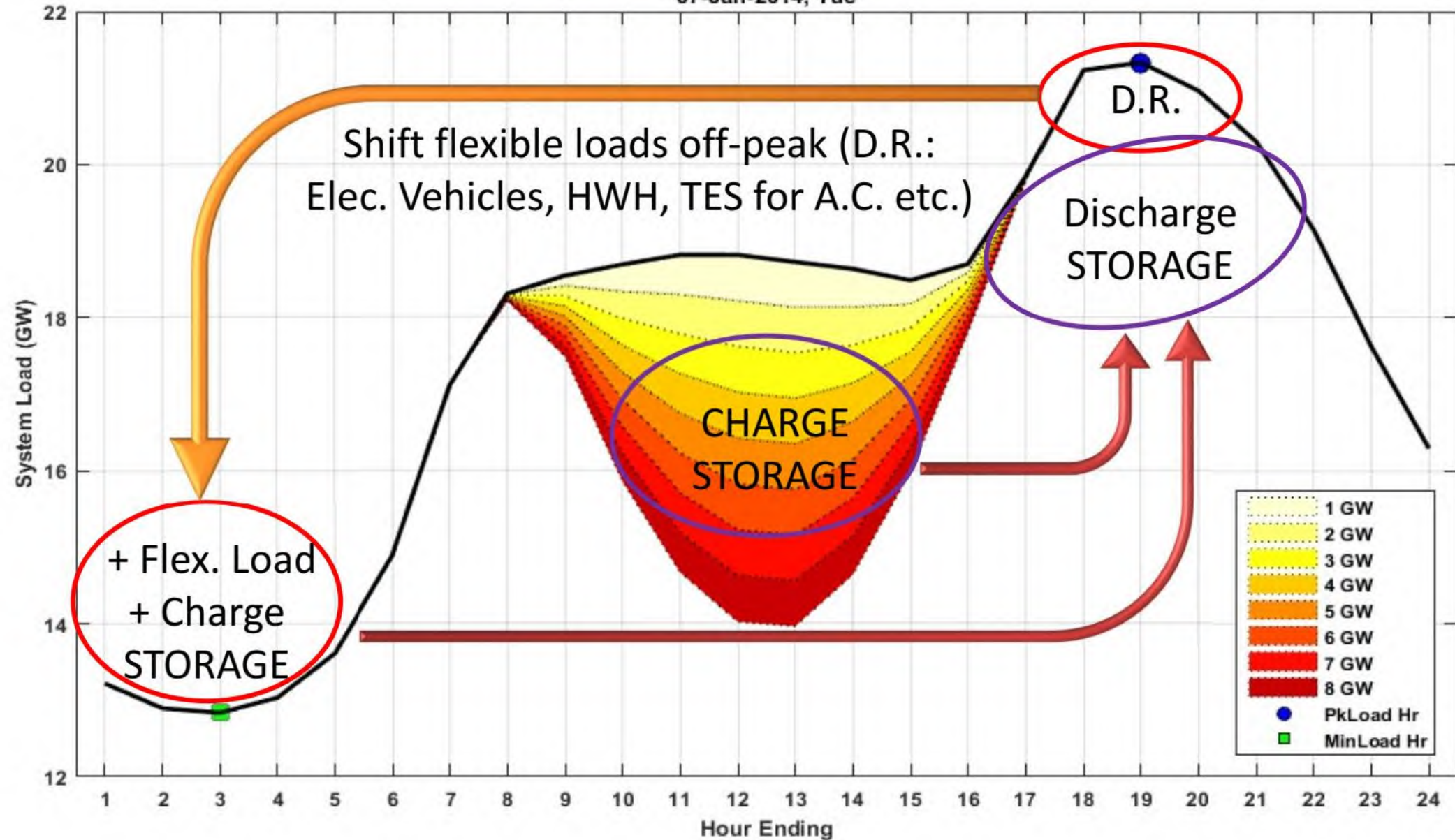
Slide borrowed and adapted from MA Energy Storage Initiative 9/27/16 presentation:
<https://www.mass.gov/files/documents/2016/09/xd/9-27-16-storage-presentation.pdf>

NH LOAD DURATION CURVE, 4/15-3/16



New England's Duck Curve

07-Jan-2014; Tue



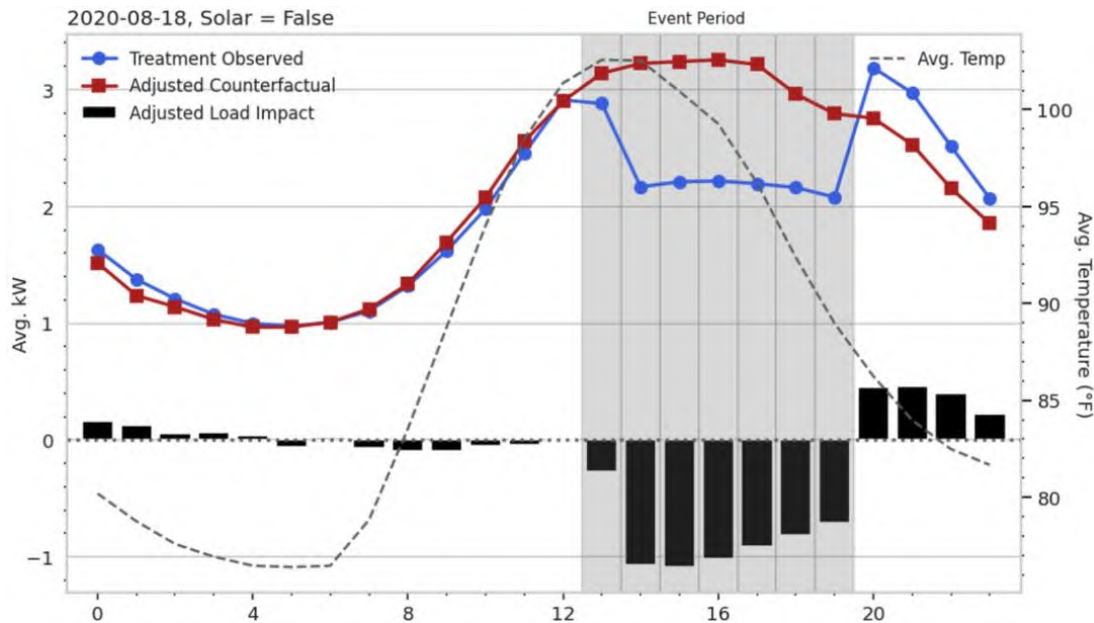
Value-Added Data Services

Calpine will help enable Coalition in-house data capabilities & analytics for local programs

Deployment of industry-leading software tools: Recurve Analytics' Planner & "DemandFlex Market"

Values actual \$\$\$ impact of efficiency, demand response, and distributed generation based on weather-normalized metered usage.

Used by CPAs to target, plan, and create "**virtual power plants**" out of customer resources to lower wholesale risk!



Unparalleled Transparency & Access to CPA Data

Direct access to data managed by Calpine on behalf of CPAs + log-ins to Customer Relationship Management platform for Coalition staff (key account managers) + assistance setting up Coalition's in-house data warehouse to ingest & analyze data independently:



Coalition Model vs. Broker Model

Coalition Model

- ⚡ Transparent, locally accountable **governance**
- ⚡ Non-profit, Member-controlled **reserve fund** accrual + investment opportunities
- ⚡ Active **portfolio management** to manage costs
- ⚡ Ability to adjust rates to maintain discount / stability
- ⚡ Proven model to finance & develop **local projects**
- ⚡ Economics + political **scale** = lower costs & leadership on policy reform
- ⚡ **Demystifies** power sector for informed decision-making & innovation over time

Broker Model

- ⚡ Simplifies approach
- ⚡ Outsources program to broker/supplier team
- ⚡ Governance + oversight largely limited to broker/supplier selection & contract approval
- ⚡ Foregoes diversified portfolio (added risk of single supplier contract for fixed term & price)
- ⚡ No ability to adjust rates
- ⚡ No demonstrated success in developing new generation + storage projects

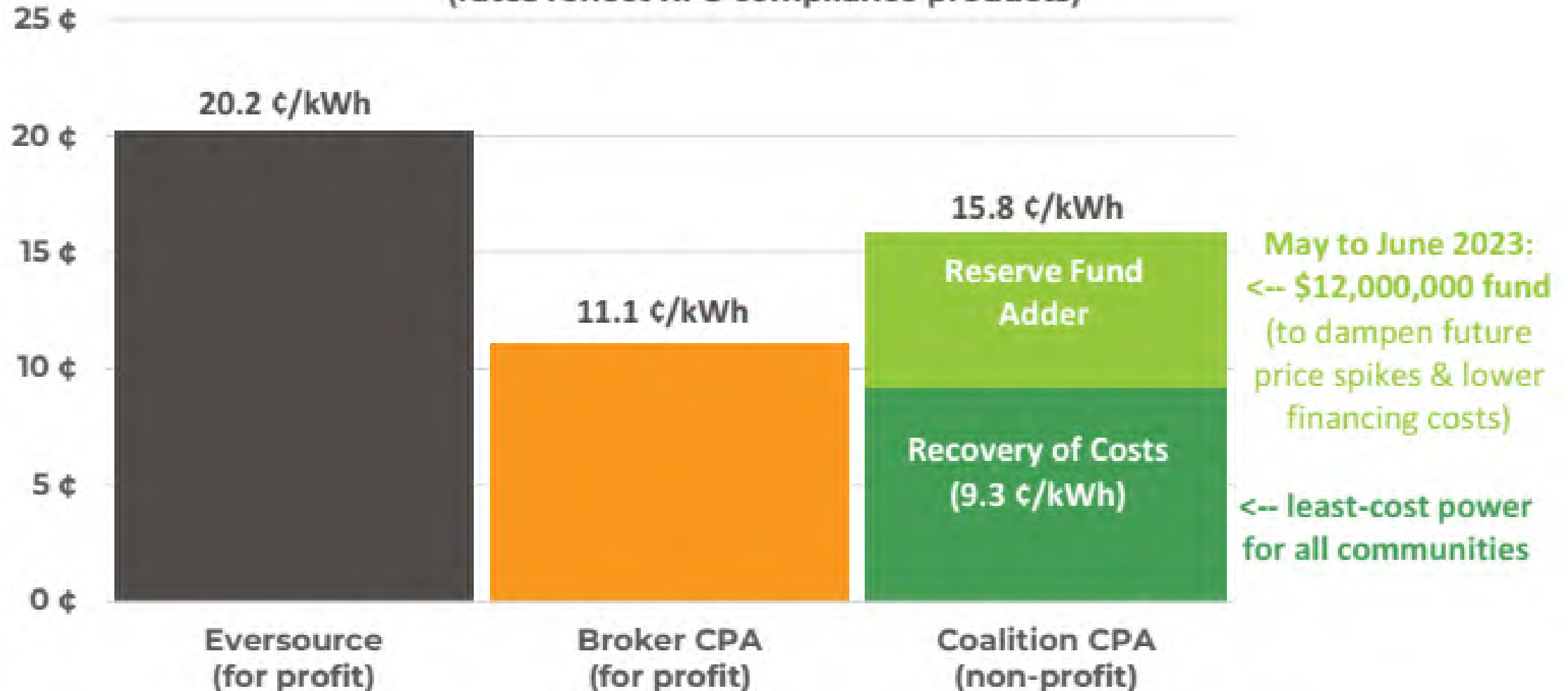
Recent trade press articles on the risks and large-scale failures of Broker Model CPAs:

1. [CCA Administrator Alleges ESCO's Action Put The Credibility Of New York's Opt- Out Aggregation Program At Risk \(April 2022\) \(https://bit.ly/3Pod6W3\)](https://bit.ly/3Pod6W3)
2. [Retail Supplier Files Bankruptcy, Customers Returned To Default Service; Supplier Serves Over 100 Muni Aggregations \(March 2022\) \(https://bit.ly/3HtNODV\)](https://bit.ly/3HtNODV)

Value Comparison:

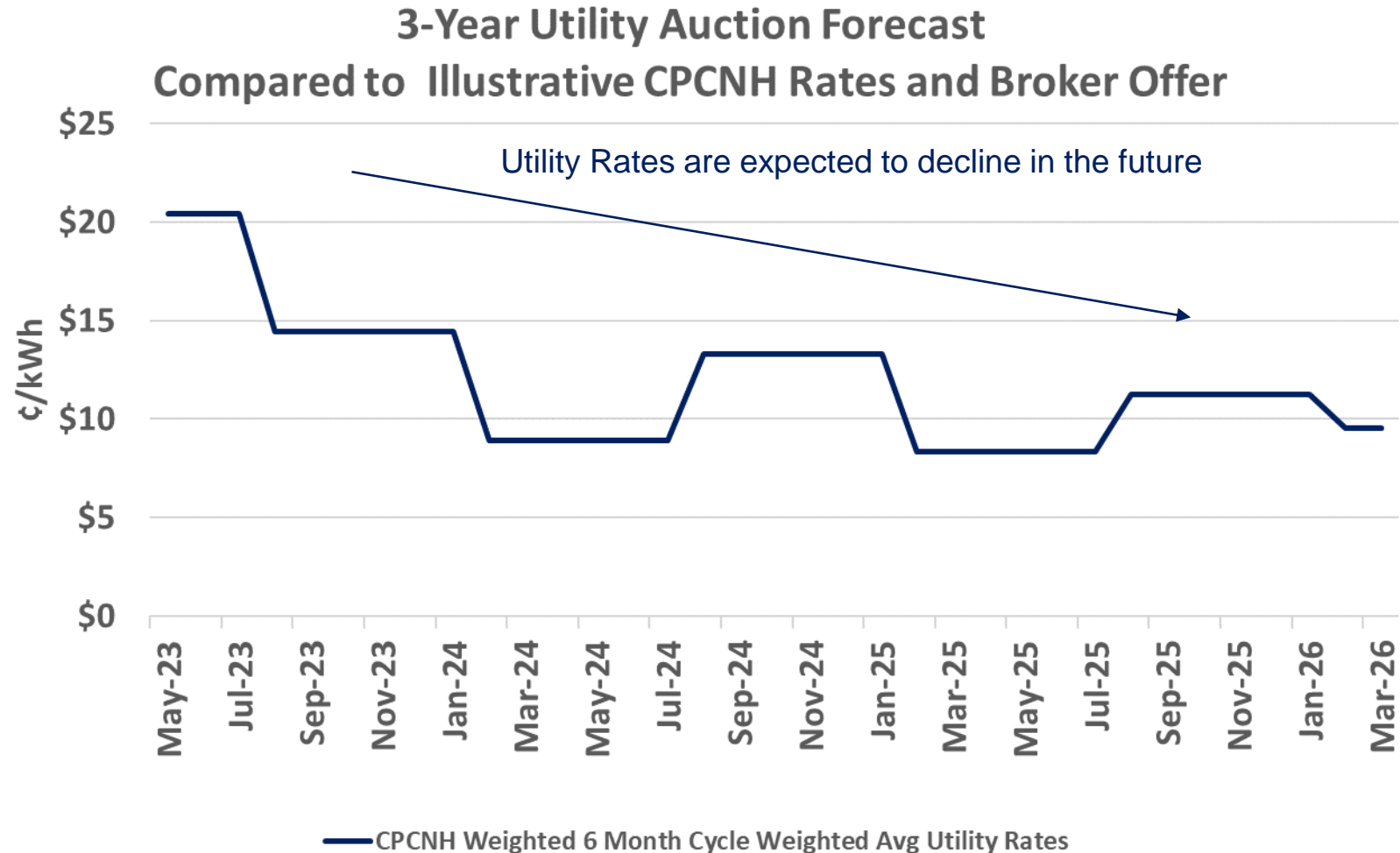
Utility vs. Broker vs. Power Agency

Customer Rates vs. Cost Savings Comparison
(rates reflect RPS compliance products)



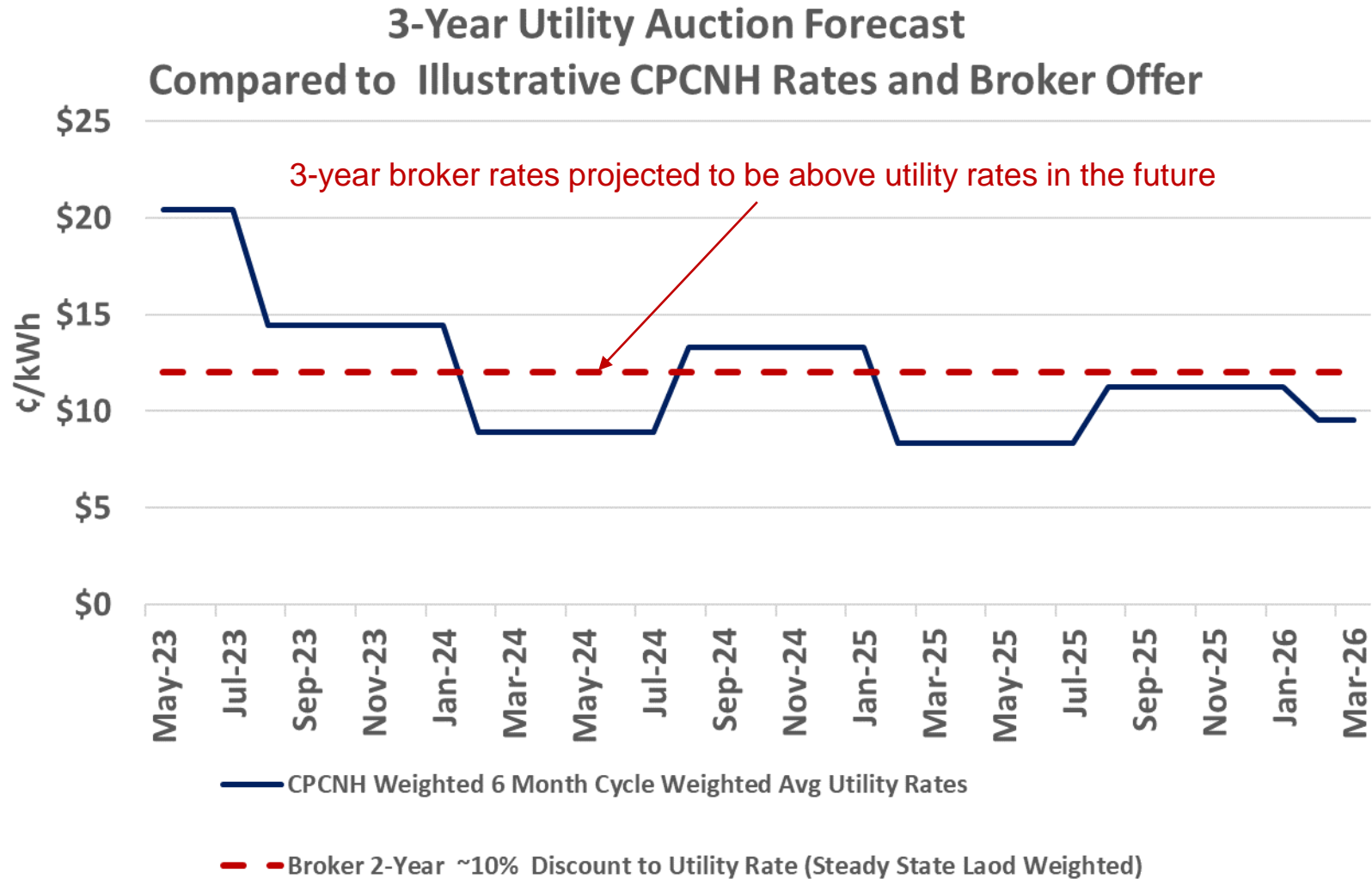
Illustrative 3-Year Utility Auction Forecast

Based on Q1 2023 forward market prices



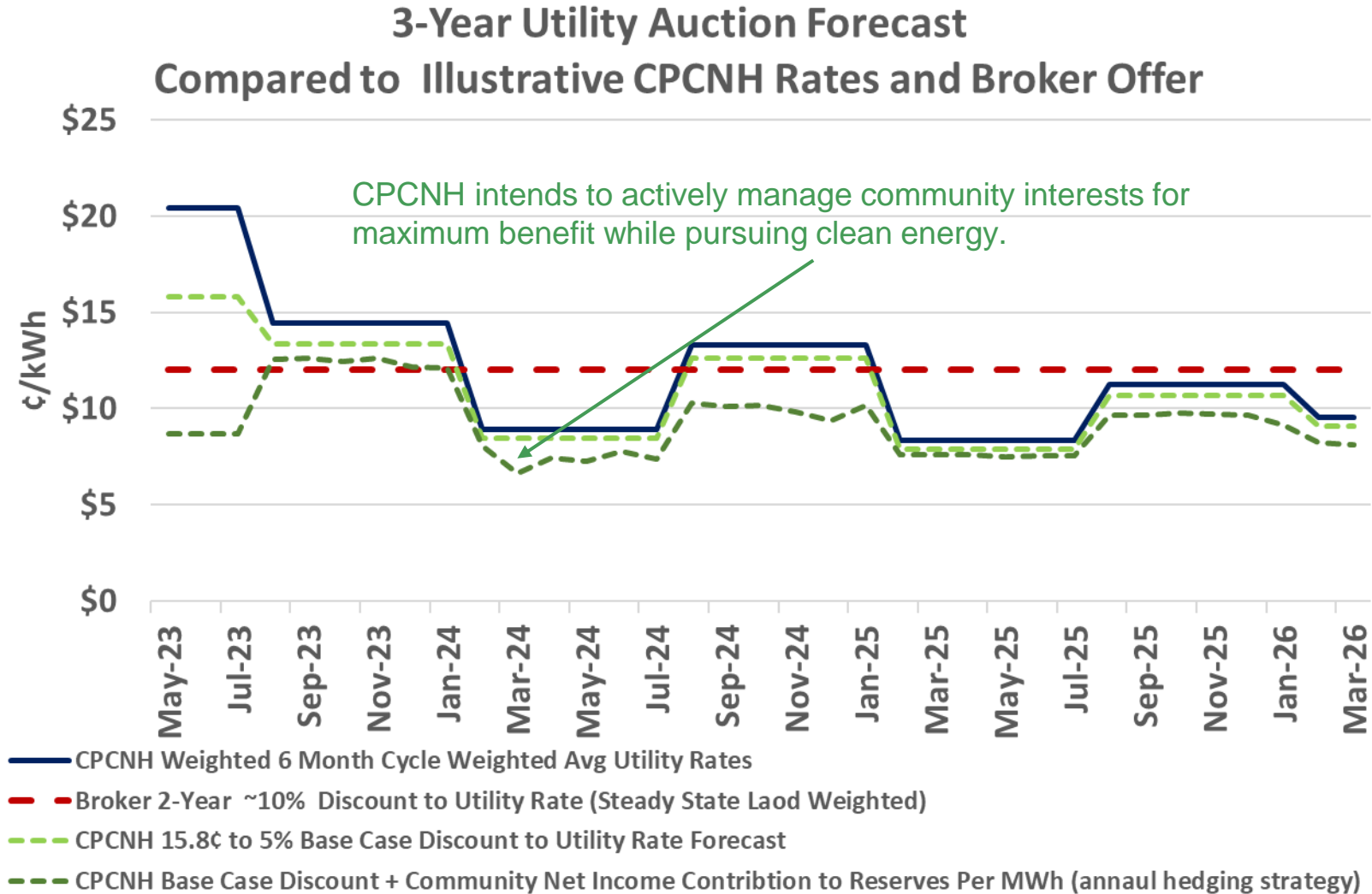
Illustrative 12¢/kWh Brokered Rate

yielding a load weighted average 3% discount over the entire 3 years



Illustrative CPCNH Rate Overlay

Showing customer savings AND total community Benefit



Please Join Us In Financing & Developing NH's Energy Future



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For communities, by communities.

Questions & Discussion

www.CPCNH.org

CommunityPowerNH.gov