

NH Energy Landscape Patterns, Policy and Potential

NHMA Conference | Wednesday, Nov 16, 2022 | 1:30PM – 2:45PM

Speakers

- ⚡ Chris Skoglund, Clean Energy NH, Director of Energy Transition
- ⚡ Clifton Below, Community Power Coalition of New Hampshire, Board Chair
- ⚡ Henry Herndon, Community Power Coalition of New Hampshire, Consultant

FOR COMMUNITIES, BY COMMUNITIES.



CLEAN ENERGY NH
Your Voice in All Energy Matters



**COMMUNITY
POWER COALITION
OF NEW HAMPSHIRE**

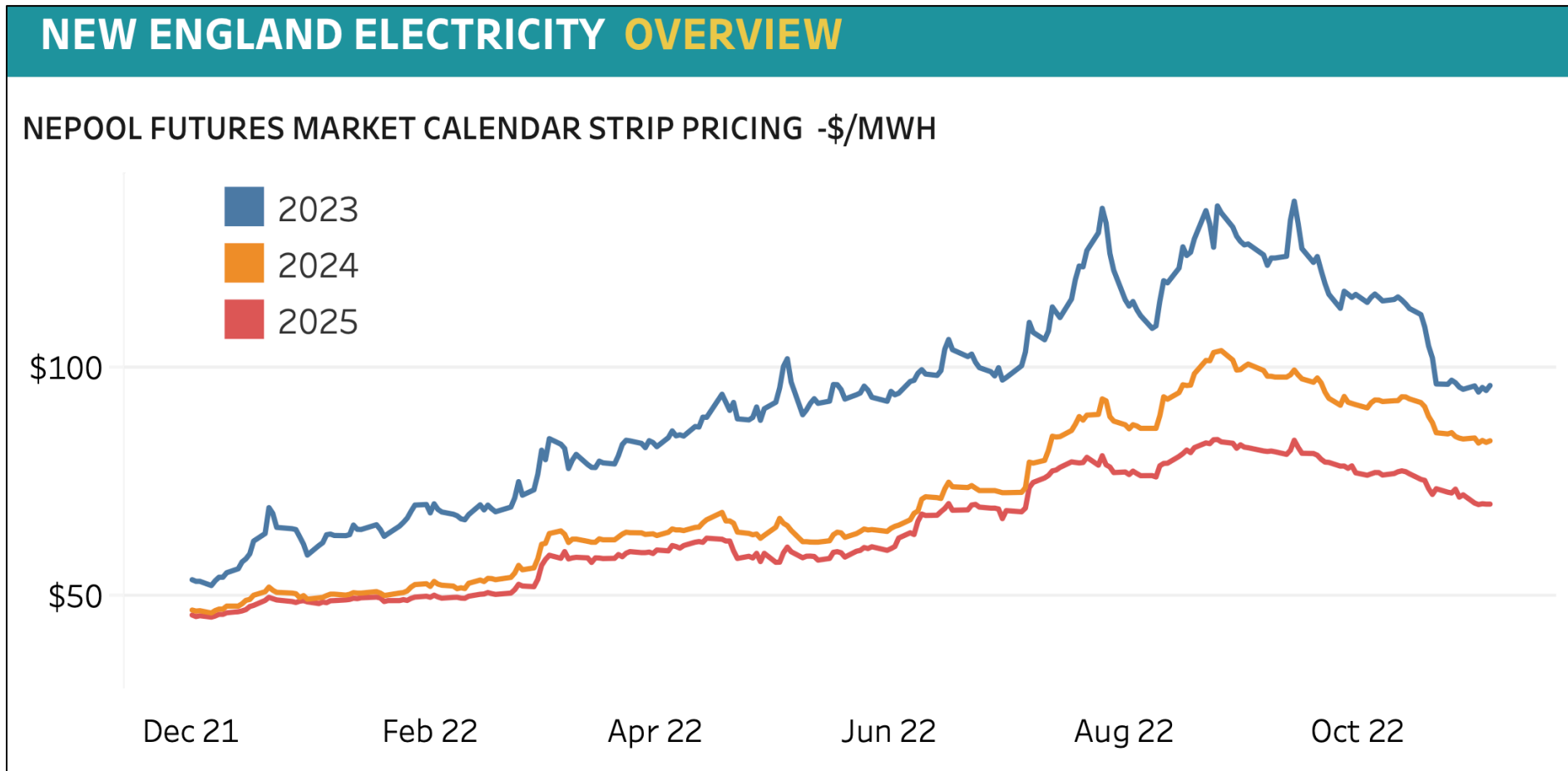


Agenda

- 1 | Context, Energy Cost Spikes & Causes, Solutions Within Reach
- 2 | Unpacking Developing Energy Solutions
 - ⚡ Inflation Reduction Act – Municipal Energy Incentives
 - ⚡ Community Power Coalition of New Hampshire
 - ⚡ Statewide Energy Data Platform
 - ⚡ 2023 Legislation: Building a Granite State Energy Market
- 3 | Empowering Local Leadership on Energy Projects & Policy
- 4 | Questions & Discussion

CONTEXT: Energy Price Spikes & Causes

Solutions Within Reach



Source: Competitive Energy Services 10/31 – 11/4 Market Summary



REUTERS

4 minute read · November 2, 2022 4:18 PM EDT · Last Updated 6 days ago

Frigid winter? New Englanders will pay through frozen noses for oil and gas

By Scott Disavino and Laura Sanicola

Residential consumers in New England are expected to pay an average of 26.3 cents per kilowatt hour for electricity and \$19.90 per thousand cubic feet for gas in January 2023, up more than 15% from last year and the most on record for both during January, according to EIA data going back to 1997.

Illustrative Electric Bill Breakdown

Energy Delivery
(Poles & Wires)

~50%

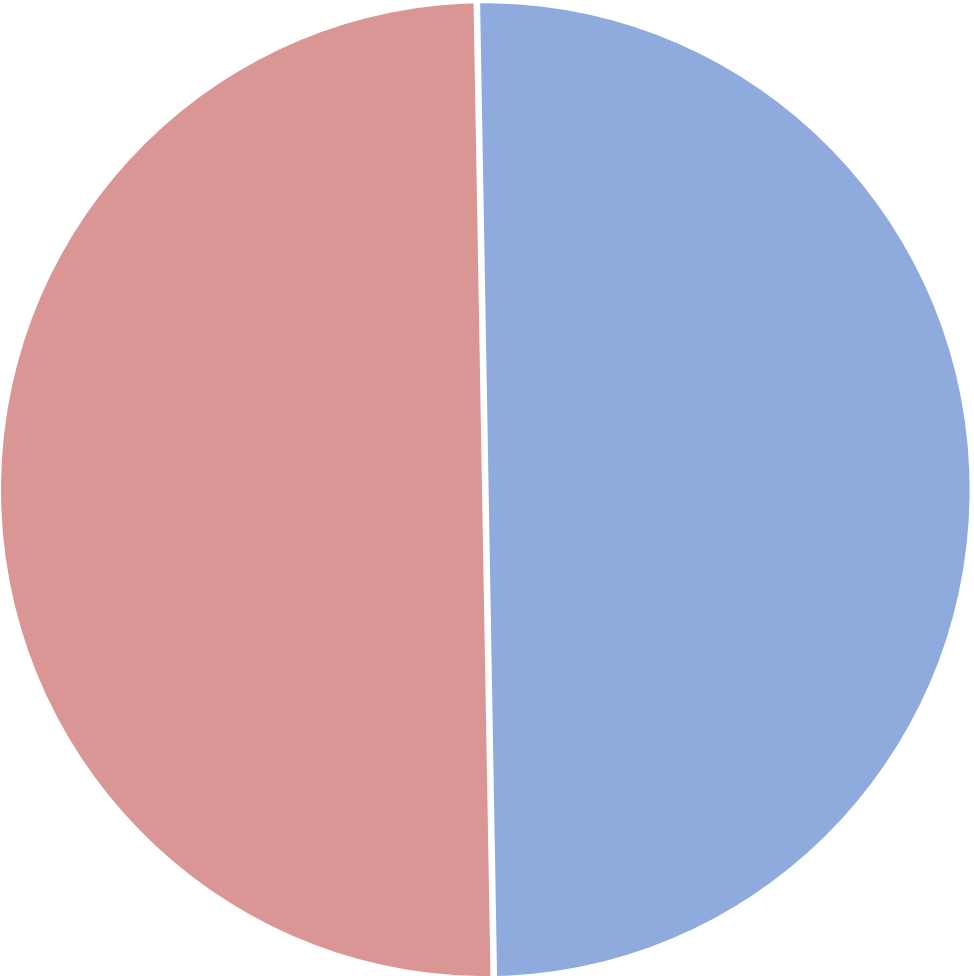
Regulated Monopolies

Eversource

Liberty

Unitil

NH Electric Coop



Energy Supply
(Generation)

~50%

Competitive Market

Utility Default Supply

Competitive Energy Supplier

Community Power

Illustrative Electric Bill Breakdown

NHSaves & Energy Efficiency (SBC)

Renewable Portfolio Standard

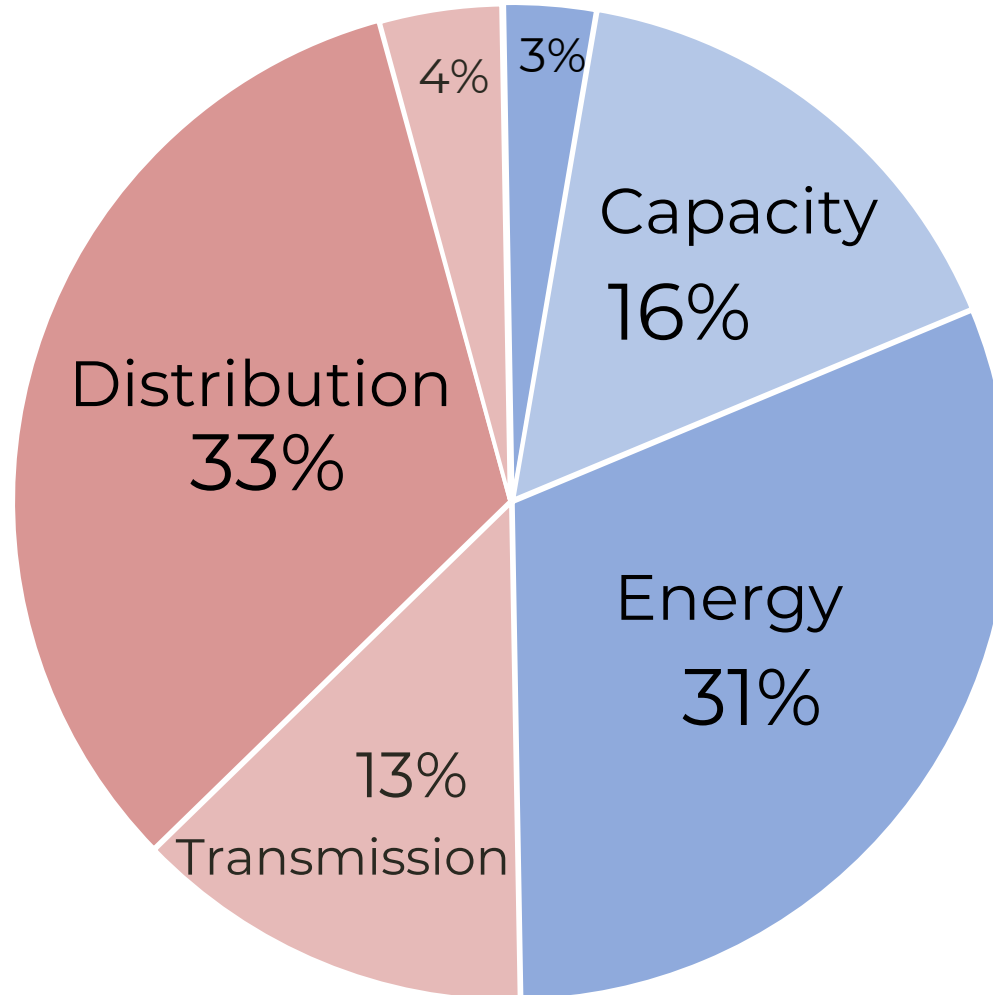
Energy Delivery
(Poles & Wires)
~50%

Energy Supply
(Generation)
~50%

Monopoly Distribution Cos.

- Eversource
- Liberty
- Unitil
- NH Electric Coop

- Competitive Market
- Utility Default Supply
 - Community Power Supply
 - Competitive Energy Supply

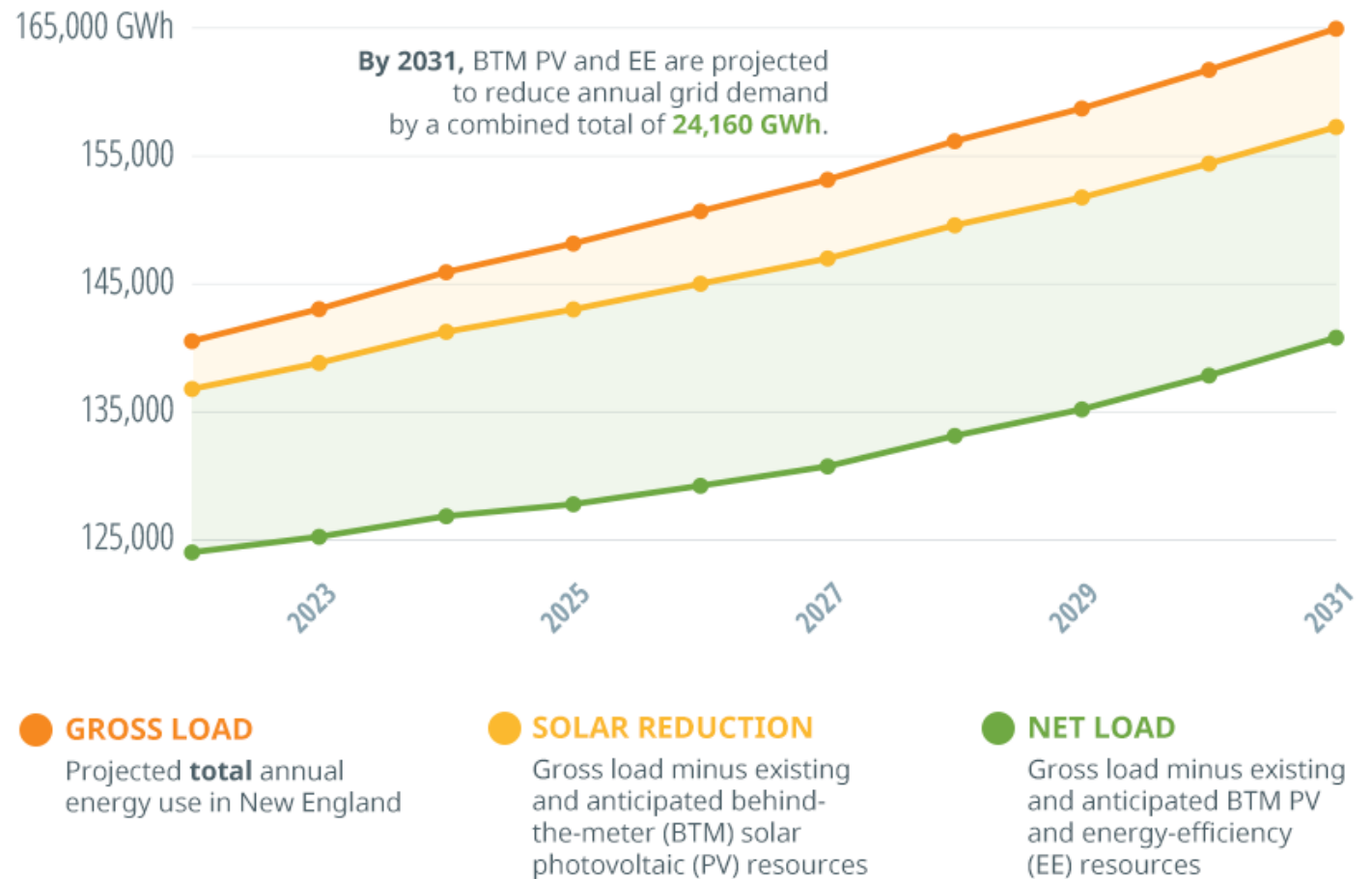


**All percentages are rough approximations for illustrative purposes*

“Load Reduction” From Energy Efficiency and Distributed Generation Lowers Electricity Costs

Particularly (1) Energy; (2) Capacity; (3) Transmission

Projected annual energy use, with and without behind-the-meter solar and energy efficiency



Source: ISO New England 2022 Celt Report

When Community Power generators / battery storage provide power to the **distribution system** during **transmission & capacity** peaks, they help reduce these costs for all New Hampshire ratepayers.

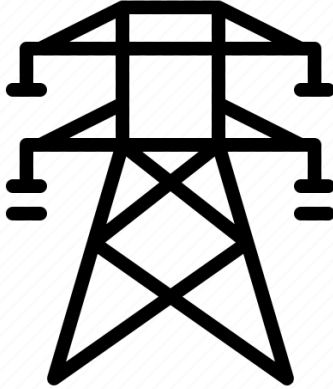
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INTER-STATE WHOLESALE MARKET

Wholesale Generator



Inter-state Transmission

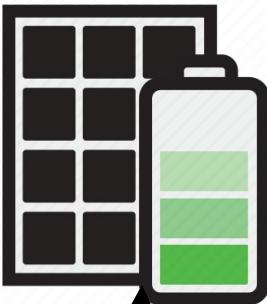


STATE JURISDICTION

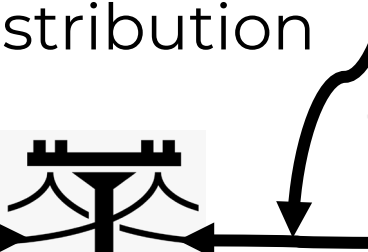
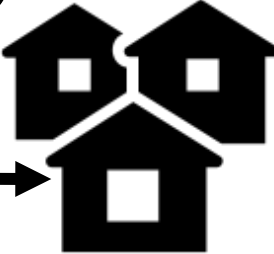
INTRA-STATE

WHOLESALE MARKET

CP Generator (<5 MW)



Distribution



Unpacking Developing Energy Solutions

- ⚡ Inflation Reduction Act – Municipal Energy Incentives
- ⚡ Community Power Coalition of New Hampshire
- ⚡ Statewide Energy Data Platform
- ⚡ 2023 Legislation: Building a Granite State Energy Market



**COMMUNITY
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For communities, by communities.

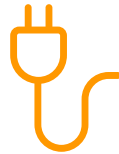


Inflation Reduction Act (IRA) & Infrastructure Investment & Jobs Act (IIJA)

- ⚡ IRA - Many opportunities for municipalities
 - ⚡ **DIRECT PAY** “Tax Credits” for renewable energy investments equivalent to private investment (30% + adders), battery storage & interconnection costs
 - ⚡ **EV INFRASTRUCTURE** ⚡ **RESILIENCY** ⚡ **STRETCH CODE ADOPTION Support**
 - ⚡ **CLEAN COMMERCIAL VEHICLES** up to \$40K direct pay credit for heavy veh.
- ⚡ IIJA - Grid Resilience Innovation Partnership Programs GRIP – \$10.5 B over 5 yrs.
- ⚡ Much of the funding open to local governments, encourages partnership with utilities
 - ⚡ **SMART GRID GRANTS** facilitate integration of electrification, DERs, etc.
 - ⚡ **GRID INNOVATION PROGRAM** investments that accelerate connecting of clean energy generation, utilization of distribution grid assets to provide backup power and reduce transmission requirements & more.

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**

Economies of Scale

Utility Company
Delivers Power

Grid Reliability

Communities Benefit from
**Value Added Services &
Programs**

*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 not-for-profit
Joint Power Agency formed on 10/1/21

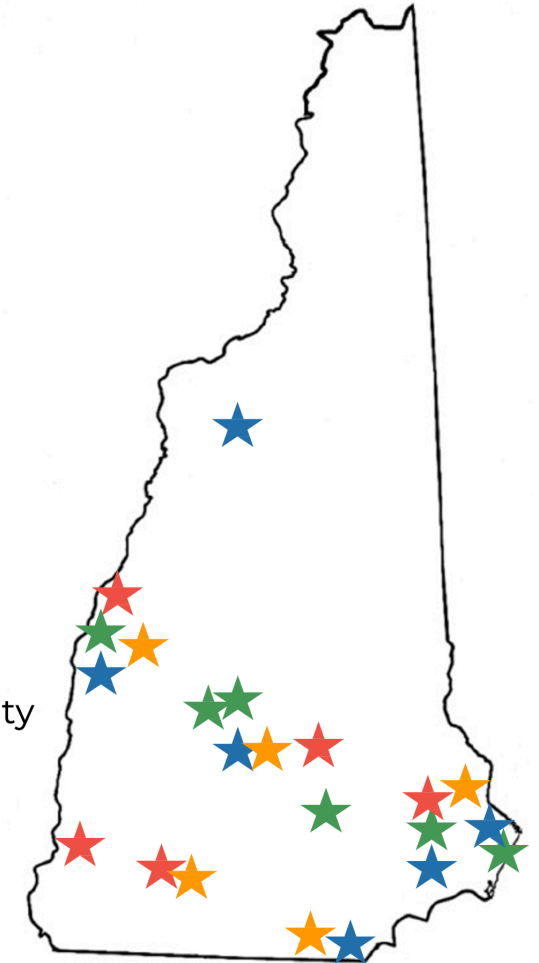
⚡ *22 Members representing:

- 20% of NH population
- ~119,000 customers
- ~960,000 MWh / year
- ~\$150 million / year revenues
(controlled by communities)

⚡ Target windows for program launch:

- Spring 2023 for 12 Members
- Spring 2024 for 8 Members

- ★ 1. Hanover
- ★ 2. Lebanon
- ★ 3. Exeter
- ★ 4. Nashua
- ★ 5. Harrisville
- ★ 6. Rye
- ★ 7. Warner
- ★ 8. Dover
- ★ 9. Walpole
- ★ 10. Newmarket
- ★ 11. Plainfield
- ★ 12. Enfield
- ★ 13. Durham
- ★ 14. Pembroke
- ★ 15. Hudson
- ★ 16. Webster
- ★ 17. Cheshire County
- ★ 18. New London
- ★ 19. Portsmouth
- ★ 20. Peterborough
- ★ 21. Canterbury
- ★ 22. Wilmot
- ★ 23. Sugar Hill

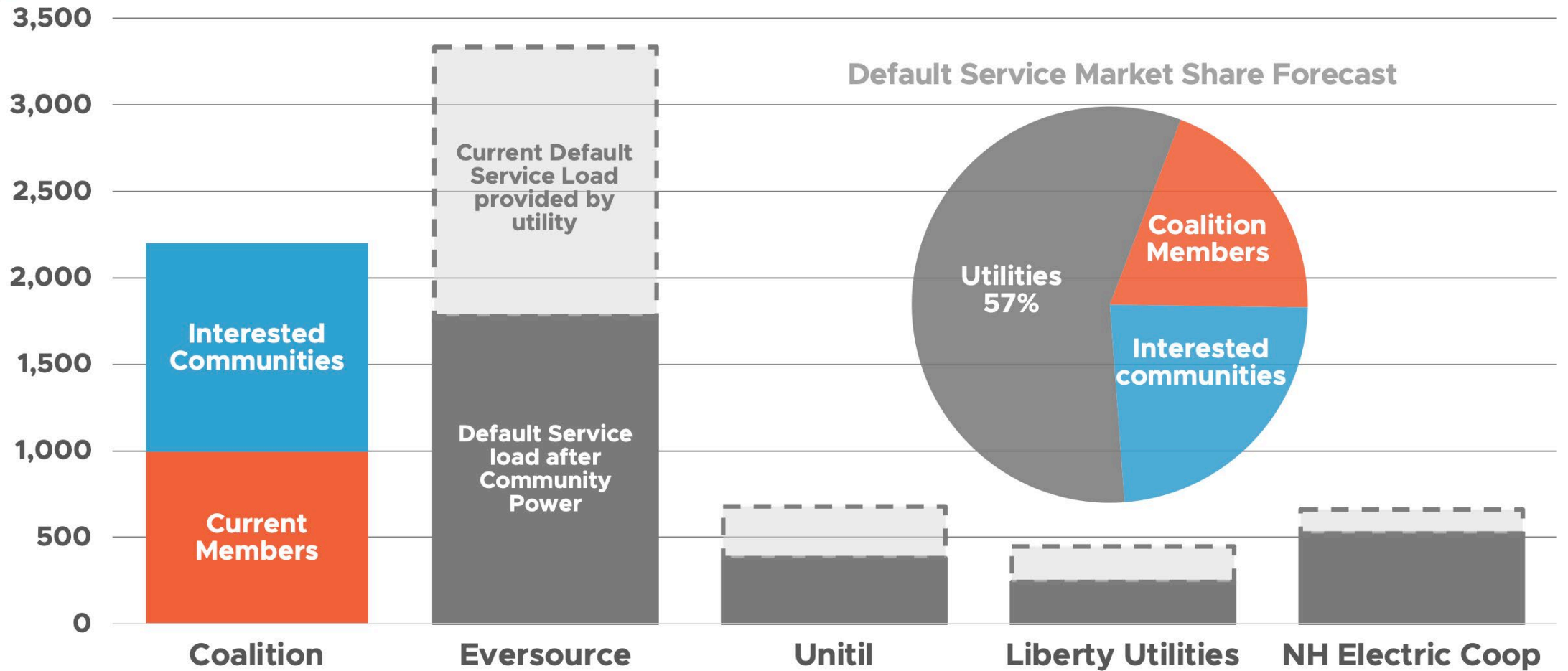


**Sugar Hill Membership pending Joint Powers Agreement transmittal*

Economy of Scale



Default Supply Service by Utility vs. Coalition (forecasted gigawatt-hours of electricity purchases)



(30+ additional communities have expressed interest in joining the Coalition)

Coalition Goals & Objectives

Our Mission

Our mission is to foster resilient New Hampshire communities by empowering them to realize their energy goals.

The Coalition will create value for our Community Power member municipalities by jointly contracting for services, developing projects and programs together, educating and engaging the public, and advocating for communities and customers at the Legislature and Public Utilities Commission.



Our Values

- ✦ Embody an inspiring vision for NH's energy future.
- ✦ Support communities to reduce energy costs and pursue economic vitality by harnessing the power of competitive markets and innovation.
- ✦ Support communities to implement successful energy and climate policies and to promote the transition to a carbon neutral energy system.
- ✦ Balance the interests of member communities who are diverse in demographics, geography and their energy goals.
- ✦ Use our shared expertise, leadership and skills to educate, empower and build the capacities of our members.
- ✦ Help communities demystify the power sector to make informed decisions.
- ✦ Facilitate collaboration and teamwork by championing diversity, equity and inclusion of people and communities of all kinds.

Governed “for Communities, by Communities”

BOARD OF DIRECTORS

- 1 Director Clifton Below, City of Lebanon (alternate: Greg Ames)
- 2 Vice Chair Christopher G. Parker, City of Dover (alternate: Jackson Kaspari)
- 3 Treasurer Kimberley Smith Quirk, Town of Enfield (alternate: Jo-Ellen Courtney)
- 4 Secretary Doria Brown, City of Nashua (alternate:)
- 5 Director Terry Clark, Cheshire County (alternate: Chris Coates)
- 6 Director Kevin Charette, City of Portsmouth (alternate: Peter Rice)
- 7 Director Kent Ruesswick, Town of Canterbury (alternate: Howard Moffett)
- 8 Director Amanda (Mandy) Merrill, Town of Durham (alternate: Nat Balch)
- 9 Director Nick Devonshire, Town of Exeter (alternate: Julie Gilman)
- 10 Director April Salas, Town of Hanover (alternate: Peter Kulbacki)
- 11 Director Andrea Hodson, Town of Harrisville (alternate: Andrew Maneval)
- 12 Director Craig Putnam, Town of Hudson (alternate: Kate Messner)
- 13 Director Jamie Hess, Town of New London (alternate: Tim Paradis)
- 14 Director Toni Weinstein, Town of Newmarket (alternate: Steve Fournier)
- 15 Director Steve Walker, Town of Peterborough (alternate: Danica Melone)
- 16 Director Matthew Miller, Town of Pembroke (alternate: Jacqueline Wengenroth)
- 17 Director Evan Oxenham, Town of Plainfield (alternate: Steve Ladd)
- 18 Director Lisa Sweet, Town of Rye (alternate: Howard Kalet)
- 19 Director Paul Looney, Town of Walpole (alternate: Dennis Marcom)
- 20 Director Clyde Carson, Town of Warner (alternate: George Packard)
- 21 Director Martin Bender, Town of Webster (alternate: David Hemenway)
- 22 Director William Chaisson, Town of Wilmot (alternate:)

OFFICERS & COMMITTEE CHAIRS



[Clifton Below](#)
Chair

City of Lebanon
Assistant Mayor & City
Councillor



[Kim Quirk](#)
Treasurer

Town of Enfield
Energy Committee



[Christopher Parker](#)
Vice Chair

City of Dover
Deputy City Manager



[Evan Oxenham](#)
Secretary

Town of Plainfield
Energy Committee



[Matt Miller](#)
Chair, Risk
Management

Town of Pembroke
Energy Committee



[Lisa Sweet](#)
Chair, Member
Operations

Town of Rye
Energy Committee



[Mandy Merrill](#)
Chair, Regulatory &
Legislative Affairs

Town of Durham
Energy Committee



[April Salas](#)
Chair of CEO &
Staff Search

Town of Hanover
Sustainability Director

COMMITTEES (1) Executive (2) Finance (3) Risk Management (4) Member Operations & Engagement (5) Regulatory & Legislative Affairs (6) CEO & Staff Search

Legal Services + Startup Consulting Team



General Counsel

Decades of national, state and local experience counseling public power clients

Michael Postar, Esq.

President of DWGP



Lead Technical Consultant with 10+ years power agency design/ operations experience
Drafted Joint Powers Agreement, Business Plan / cashflow analysis, Electric Aggregation Plan template & RFP solicitations and is advising on contract negotiations, critical path, regulations, org development, etc.

Samuel Golding



New Hampshire Counsel

Elijah Emerson, Esq.



Member Services Consultant and project lead on organizing group formation and agency incorporation
Community Power program development & approval
Administrative & communications services












Henry Herndon

Operations: Wholesale, Retail, Members

Request for Proposal for Comprehensive Services & Credit Support

Four service categories:

1. Energy Portfolio Risk Management  
2. Retail Customer Services  
3. Member Services  
Your Voice in All Energy Matters
4. Financial + Accounting    (TBD)

CPCNH is in the process of negotiating service & financing agreements with these firms

Energy Risk Management Team



Dr. Gary Dorris

President of Ascend Analytics



Dr. Carlos Blanco

Managing Director of
Analytics Solutions



Dr. Allison Weis

VP Optimization



Scott
Wigglesworth

Managing Director of
Operations and Strategy



Devin Gaby

Manager of Software Services



Dr. Brandon Mauch

Manager of Resource
Planning Analytics



David Millar

Managing Director of
Resources Planning and
Procurement



Dr. Brent Nelson

Director of Market
Intelligence



Michael Ballow

Director of Analytics and
Strategy



Rishi Sahay, CFA

Director of Portfolio Analytics



Robert LaFaso

ISO Monitoring & Compliance
Analyst



Anthony Boukarim

Senior Energy Analyst

Ascend's team for CPCNH includes an additional ~30 analysts to support procurement and portfolio risk management.

Retail Customer Services Team



4M+
meters

AS OF JUNE 2022

- 100+ CCA-dedicated employees
- 200+ Call center service languages
- 200K+ Customer calls fielded annually
- 175K+ Daily usage data files received
- 750+ Rate change tests and validations performed
- 6,500+ Individual rate components managed daily
- 50+ Statutory enrollments across over 20 CCAs
- 10M+ Monthly EDI transactions



Paula White
VP Operations



Drake Welch
SVP of Community Power



Joshua Brock
VP Commercial Operations



Matthew Messina
Director of CCA Client Services



Santiago Chuck
Director of Products and Services



Matthew Leja
Manager of Systems Support

Calpine's team includes significant call center agent capacity and an additional ~20 support staff to manage CPCNH data and billing operations.

For Communities, By Communities



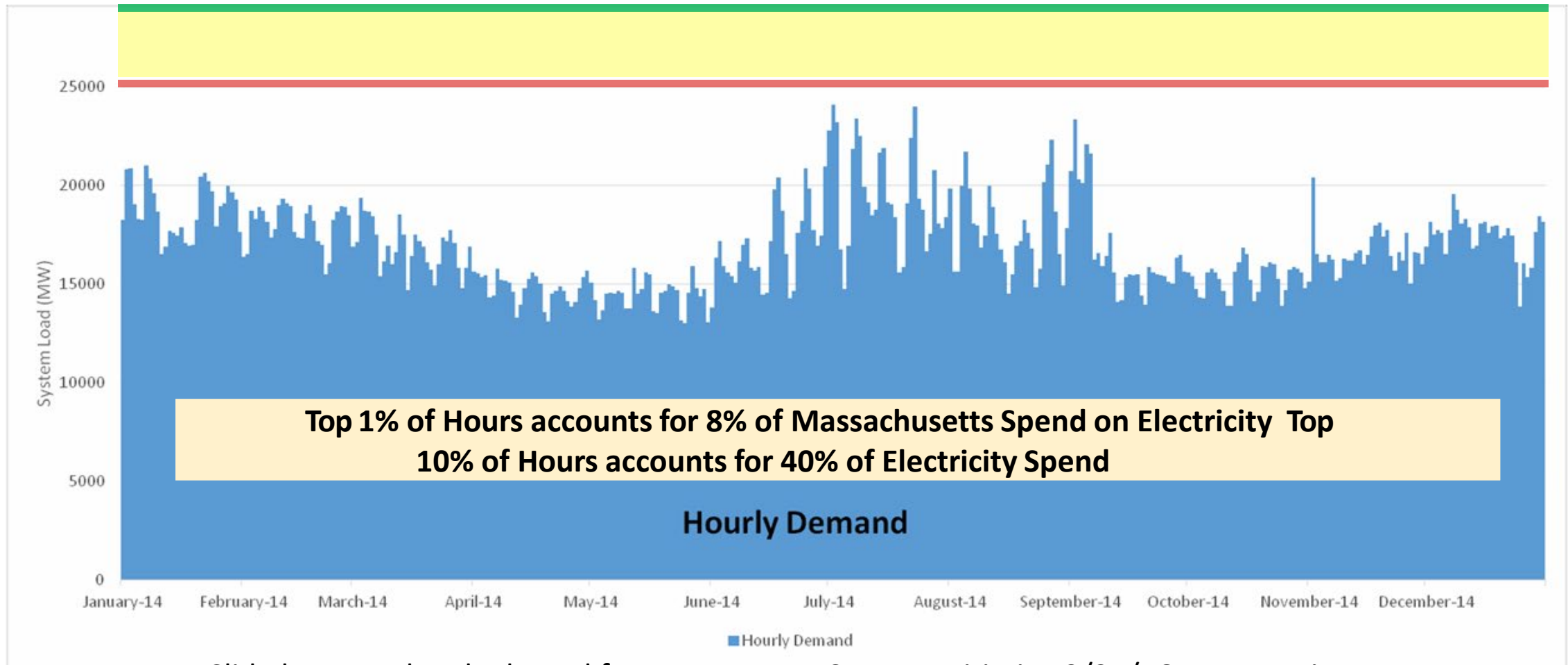
Prior & Potential New Legislation:

Creating a Marketplace for NH Energy Storage & Generation to Reduce Electricity Costs for All Ratepayers

- ⚡ STATE-WIDE ENERGY DATA PLATFORM, NHPUC DE 19-197
- ⚡ Net Metering – Value of DER study – [DE 22-060](#) (Interventions due by 12/7/22)
- ⚡ [SB 321](#) Pilots (Limited Electrical Energy Producers) RSA 362-A:2-b [IR 22-061](#) (12/9/22)
 - Creates an intra-state (within NH) market for <5 MW Distributed Generation & Storage
 - Recognize value of DERs (Distributed Energy Resources) in reducing Capacity & Transmission Costs by reducing peak demands on Grid & Bulk Power Supply (ISO-NE)
 - Make DERs part of supply portfolio for Community Power programs as direct off-takers
 - Build local economies, self-reliance, sustainability and resilient communities

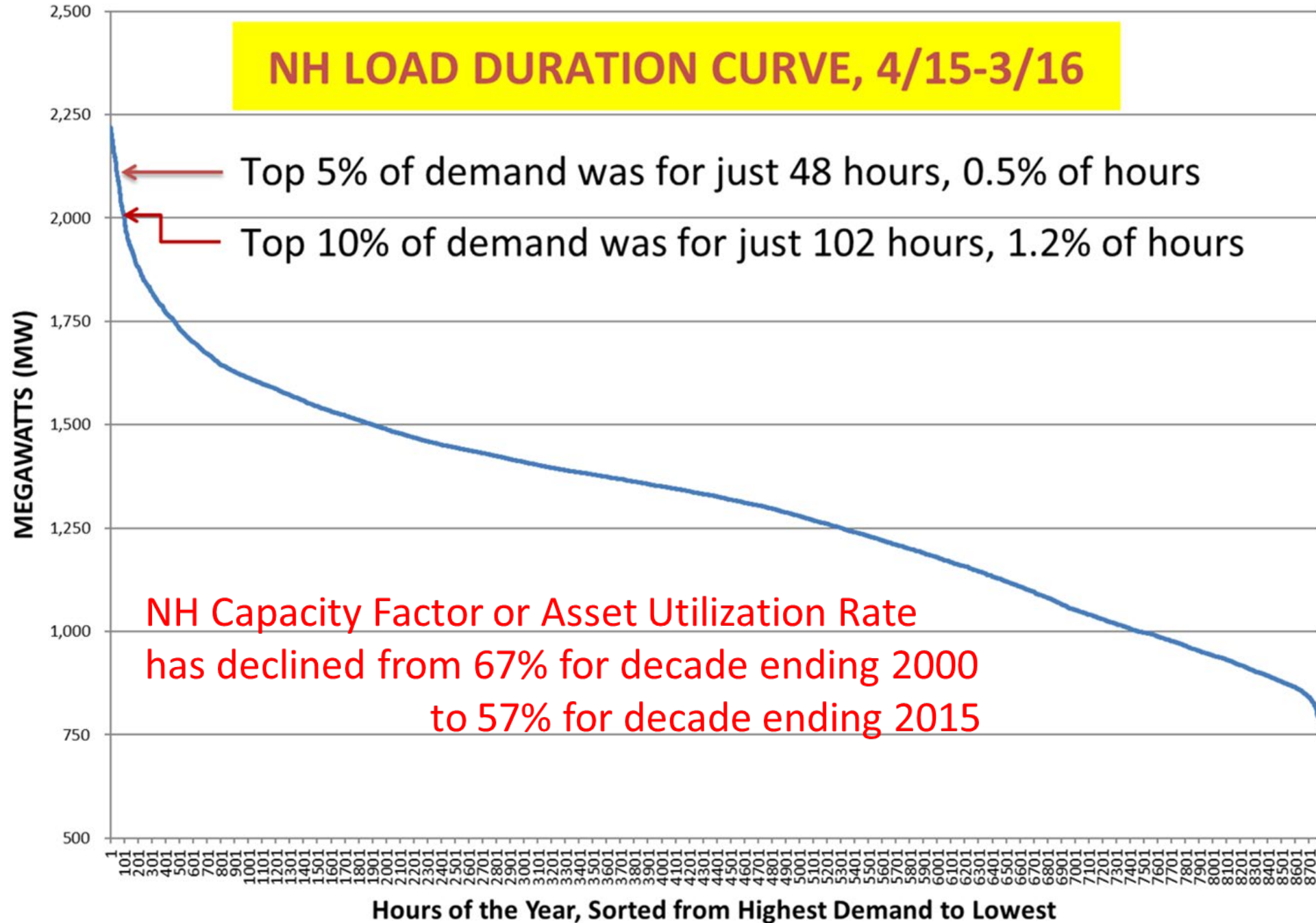
Electric Grid is Sized for Highest Hour of Demand

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



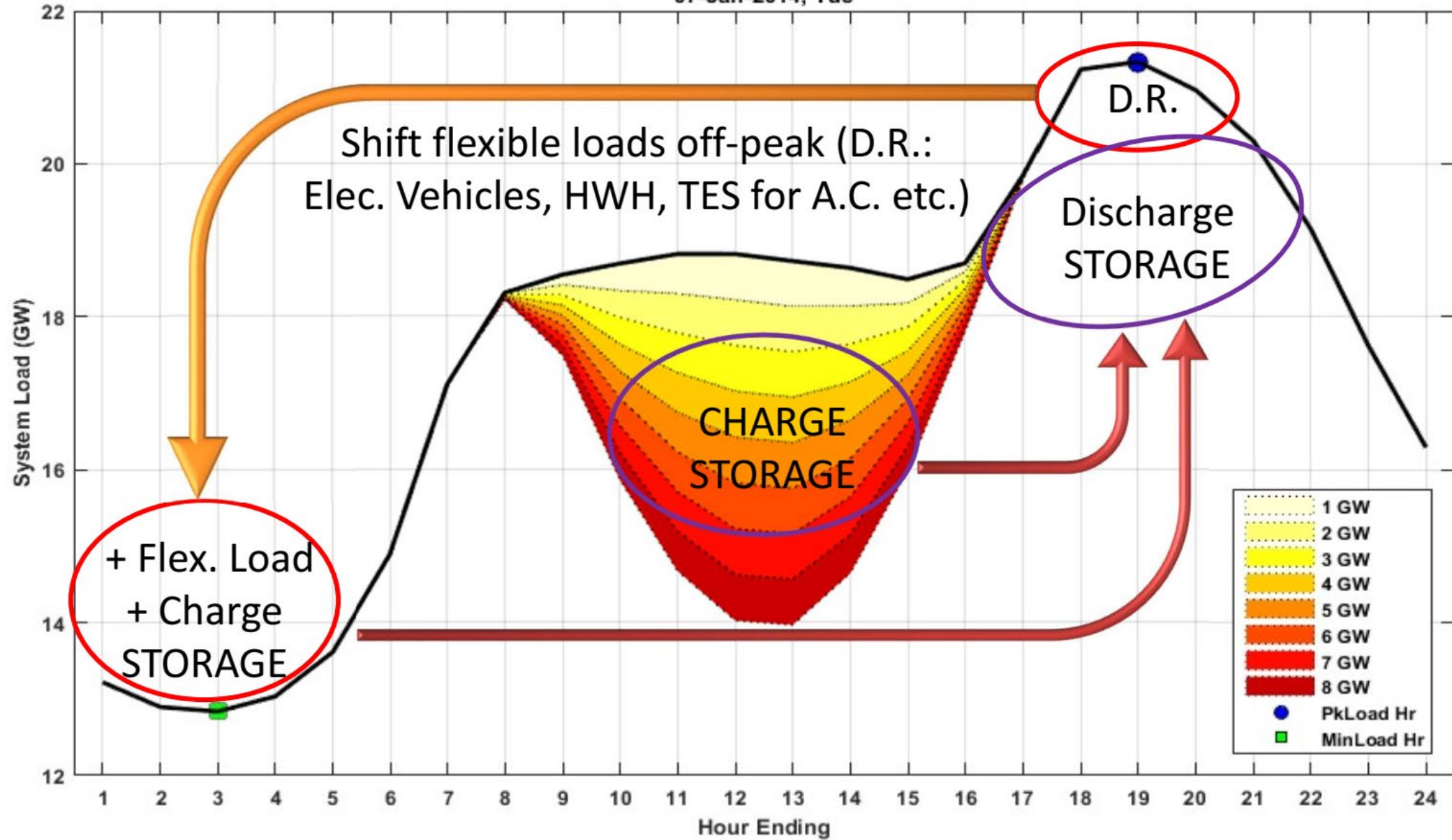
Slide borrowed and adapted from MA Energy Storage Initiative 9/27/16 presentation:
<https://www.mass.gov/files/documents/2016/09/xd/9-27-16-storage-presentation.pdf>

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



New England's Duck Curve

07-Jan-2014; Tue



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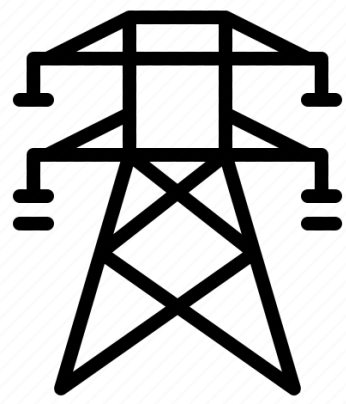
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INTER-STATE WHOLESAL MARKET

Wholesale Generator



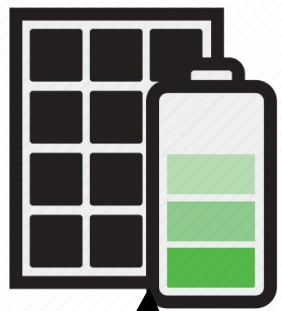
Inter-state Transmission



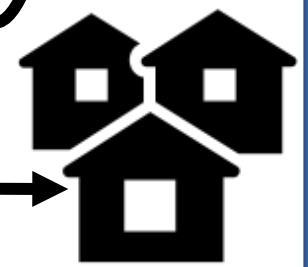
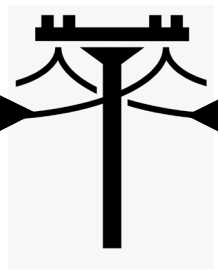
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INTRA-STATE WHOLESAL MARKET

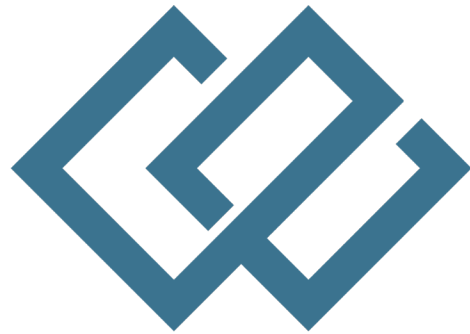
CP Generator (<5 MW)



Distribution



Questions & Discussion



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Your Voice in All Energy Matters

www.cleanenergynh.org

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