

# Can Efficiency Programs Equal Big Energy Savings For Your District?

This presentation is to be informative and not to promote specific products, services companies, etc. Illinois ASBO Sponsored Programs are permitted to promote products and services in accordance with the Service Associate Ethics Policy and Code of Conduct.

# Introductions

Kim Weaver, Speaker

- *Efficiency Made Easy Specialist, Constellation*



Glen Grimm, Speaker

- *Senior BDM, Constellation and Illinois Energy Consortium*



Dr. David Thieman, Speaker

- *Senior Business Development Executive, NextEra Energy and Illinois Energy Consortium*

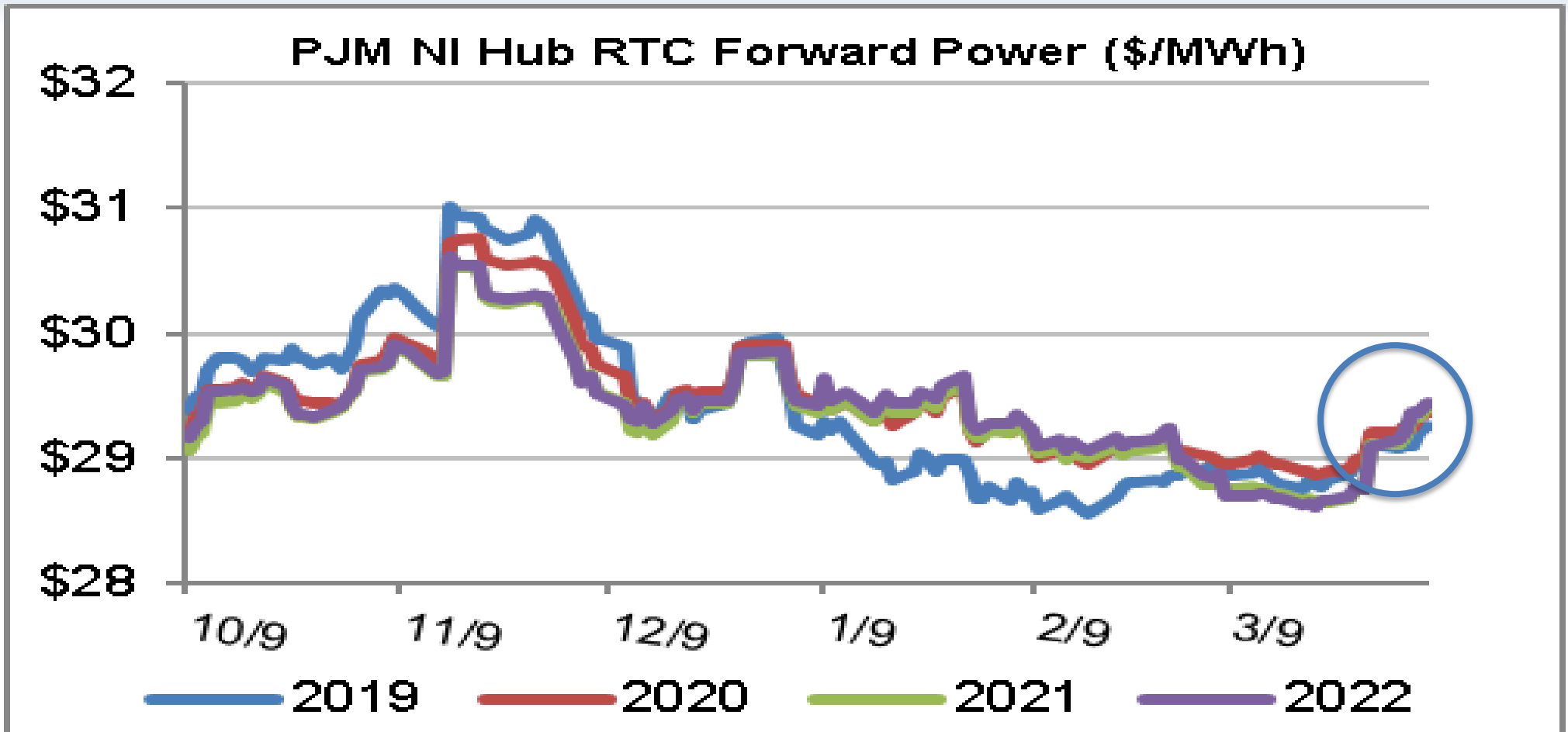


Joshua Stone. Speaker

- *Senior Product Manager; NextEra Energy*



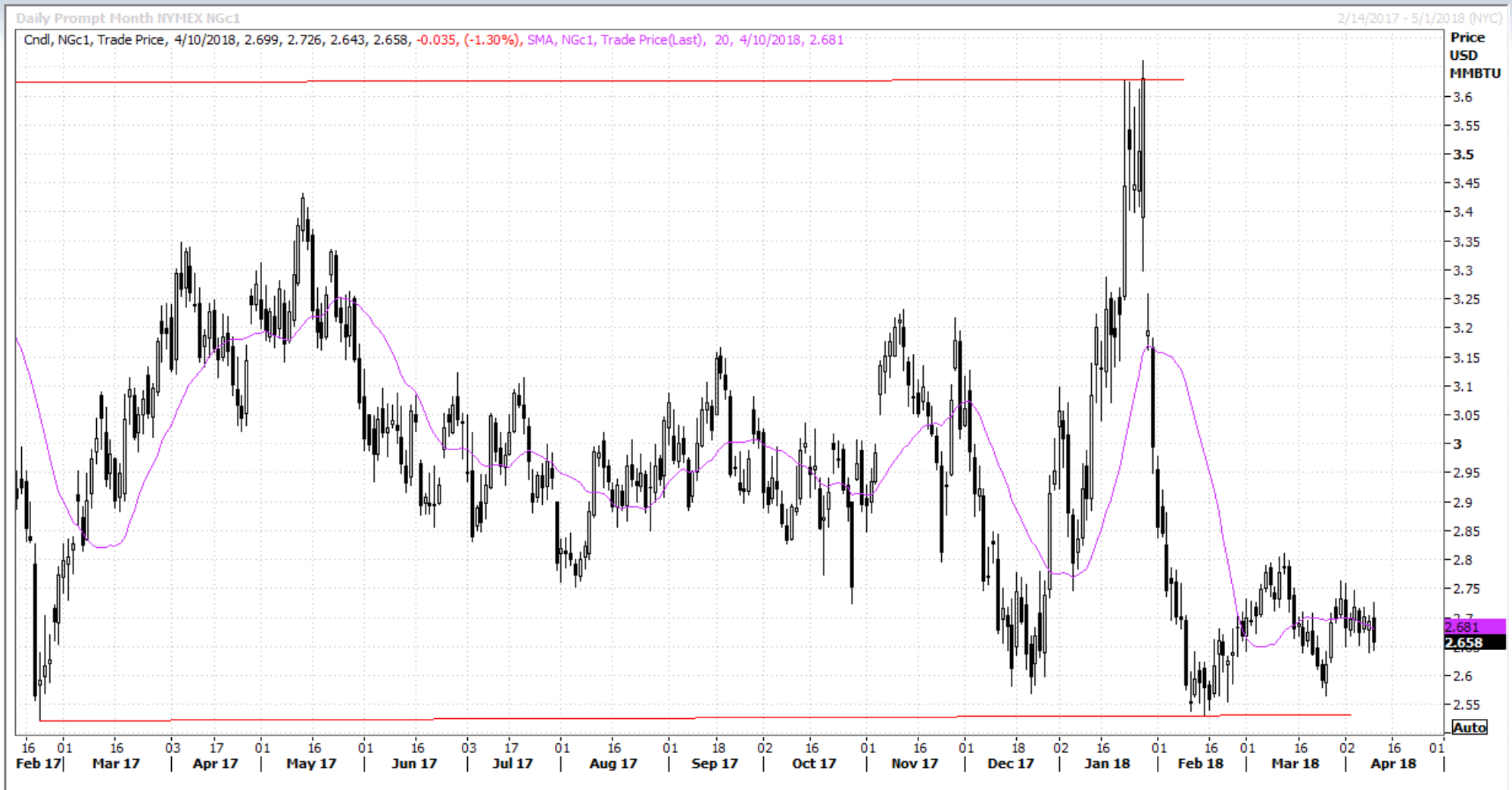
# Forward Power Price Trends (6-Month History)



**Customer Takeaway:** Forward price trends remain almost the same through 2022, and mixed across the country for a variety of reasons. Regional market such as & PJM are facing generation retirements that could put further dependence on gas fired generation capacity.

Note: These energy-only power prices are an indicative, non-transactable snapshot of the wholesale market as of COB 4/10/18.

# NYMEX Natural Gas Continues Sideways



**Customer Takeaway:** NYMEX prompt month last traded at \$2.68/MMBtu. Record level gas production is helping to alleviate concerns about the lingering cold and growing supply deficit.

 #iasboAC18

© 2018 Constellation Energy Resources, LLC. The offerings described herein are those of either Constellation NewEnergy-Gas Division, LLC or Constellation NewEnergy, Inc., affiliates of each other and ultimate subsidiaries of Exelon Corporation. Brand names and product names are trademarks or service marks of their respective holders. All rights reserved. Errors and omissions excepted.

 **THE POWER OF**  Source: Reuters  
2018 Illinois ASBO Annual Conference  
May 3 - 4, 2018, Schaumburg, IL

# Solar in Illinois Market Program and Opportunity

## Program History

- Future Energy Jobs Act (“FEJA”) passed in December 2016 – Nuke subsidies and long-term renewable requirements
- Requires 3 Gigawatts of solar be built between 2017 – 2023
  - Includes distributed generation (<= 2 MW) and Utility Scale projects (2+ MW)
- **1,500 MW of solar by 2021, 670 MW of which is distributed solar**
- Solar Adjustable Block Program (“ABP”) will create 15-year Renewable Energy Credit incentive for solar developers and asset owners to participate in on-site and community-solar projects within the Distributed

## Adjustable Block Program

- Main Incentive program for 2 MW (AC) and under
- Incentive in the form of a REC, paid for by the Utility (ComEd/Ameren)
- REC values administratively set, differentiated by system size
- REC value declines 4% block-over-block
- REC value paid to project over first 4 years of operation.

Group A (Ameren, MidAmerican, Mt. Carmel, and Rural Co-Ops and Munis in MISO)				Group B (ComEd, and the Rural Co-Ops and Munis in PJM)			
Block	MW Size	Sub-Category	REC Price	Block	MW Size	Sub-Category	REC Price
1	22	> 10-25 kW	\$74.71	1	52	> 10-25 kW	\$67.58
		> 25-100 kW	\$58.51			> 25-100 kW	\$52.62
		> 100-200 kW	\$45.75			> 100-200 kW	\$39.87
		> 200-500 kW	\$39.87			> 200-500 kW	\$33.98
		> 500-2000 kW	\$37.57			> 500-2000 kW	\$31.69
2	22	> 10-25 kW	\$71.76	2	52	> 10-25 kW	\$64.88
		> 25-100 kW	\$56.17			> 25-100 kW	\$50.52
		> 100-200 kW	\$43.92			> 100-200 kW	\$38.27
		> 200-500 kW	\$38.27			> 200-500 kW	\$32.62
		> 500-2000 kW	\$36.07			> 500-2000 kW	\$30.42
3	22	> 10-25 kW	\$68.89	3	52	> 10-25 kW	\$62.28
		> 25-100 kW	\$53.92			> 25-100 kW	\$48.50
		> 100-200 kW	\$42.16			> 100-200 kW	\$36.74
		> 200-500 kW	\$36.74			> 200-500 kW	\$31.32
		> 500-2000 kW	\$34.63			> 500-2000 kW	\$29.21

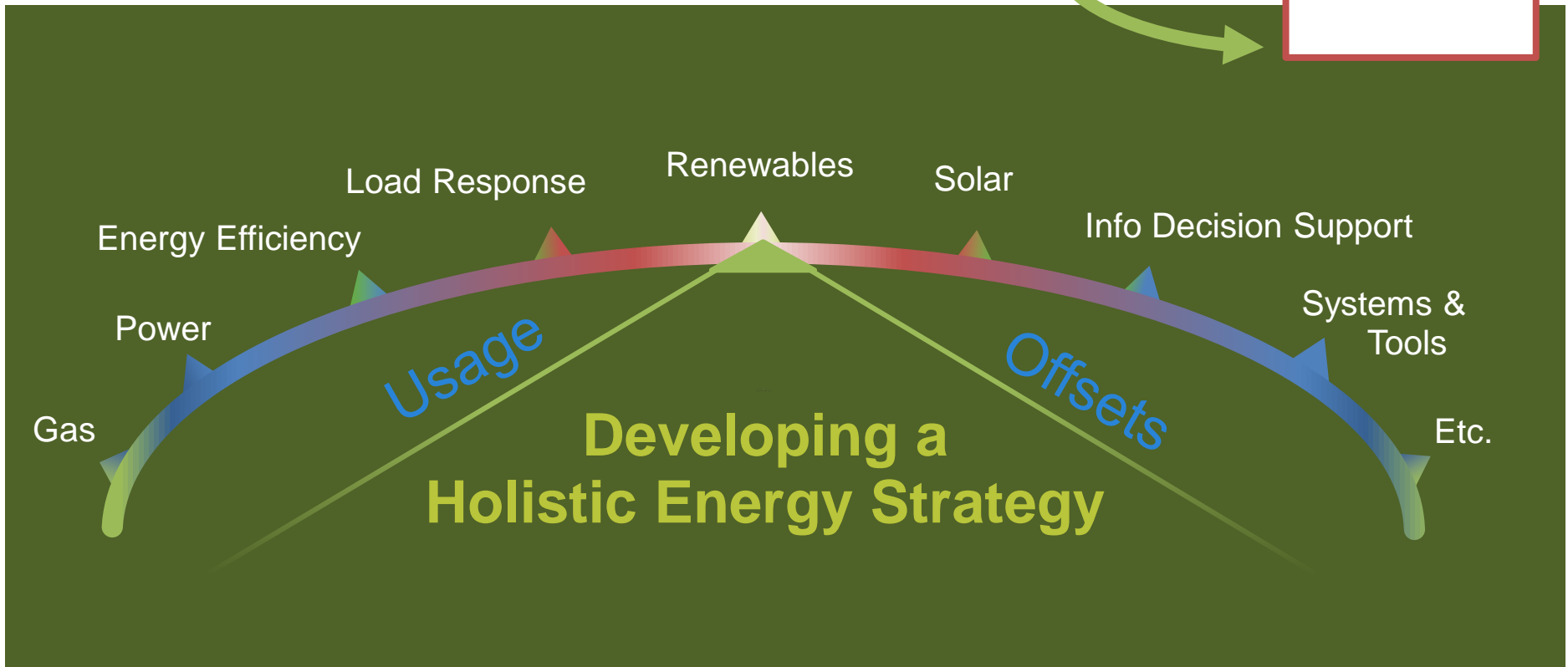
**DRAFT REC Values – NOT YET FINAL**

# Goal = Developing an Integrated Energy Strategy

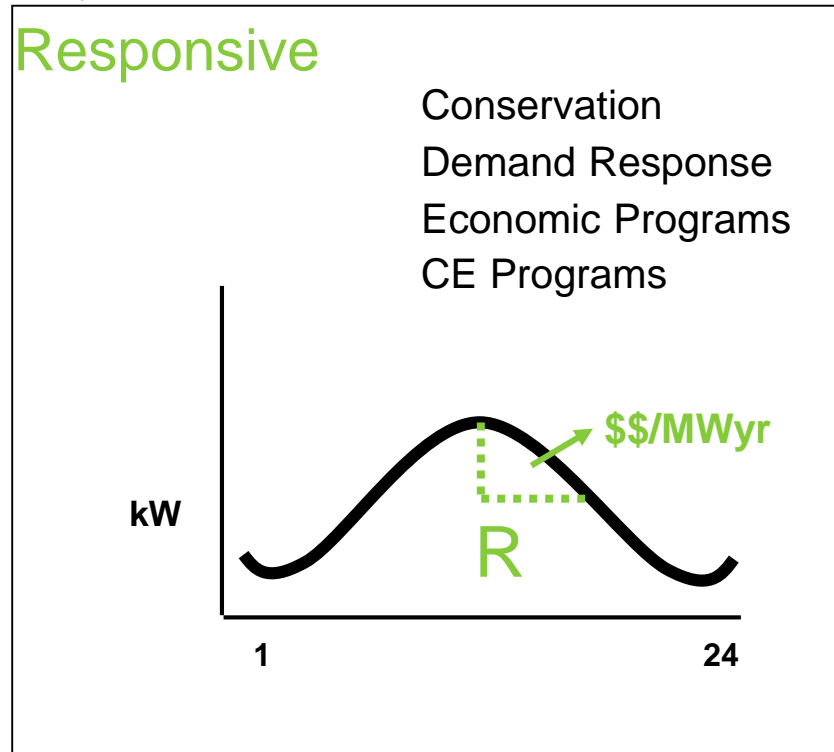
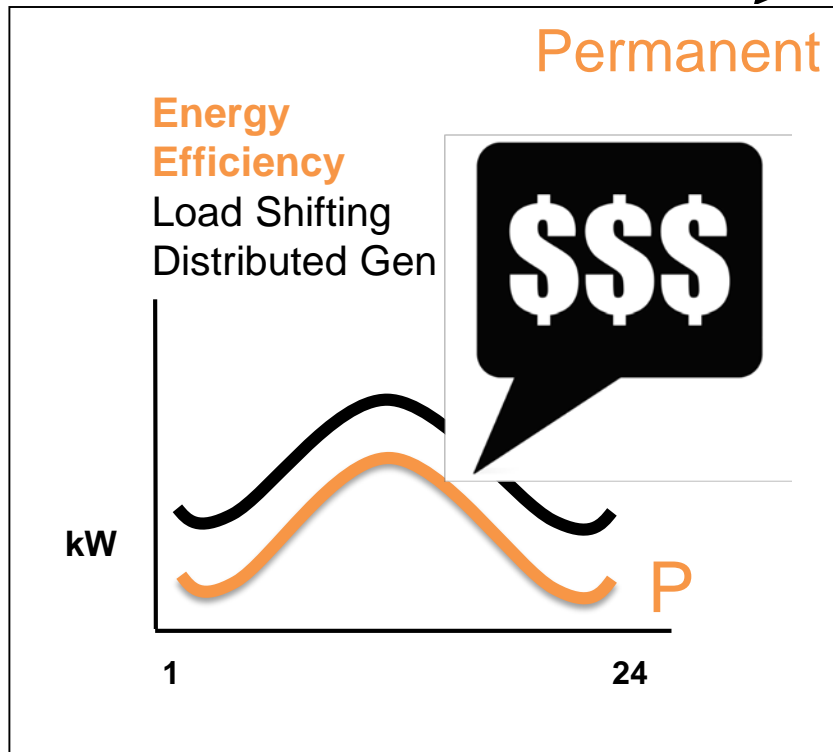
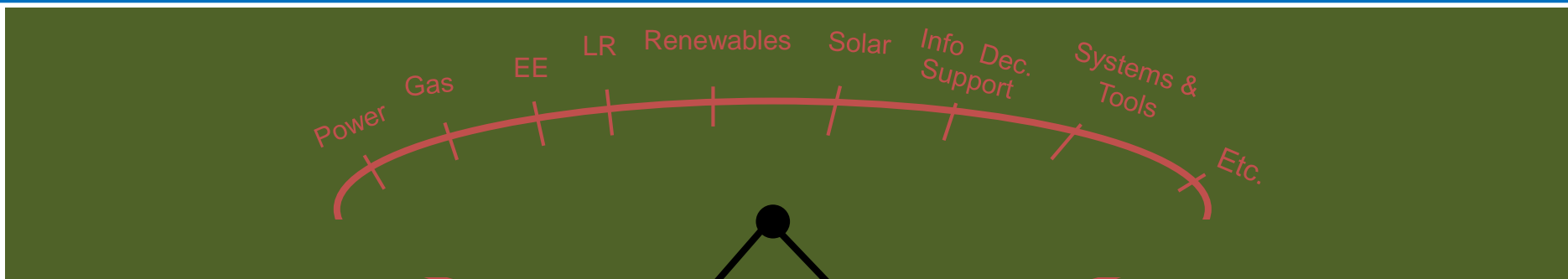
~~Cost = Price~~

$$\text{Cost} = (\text{Price} * \text{Quantity}) \text{ Time}$$

P  
/ L

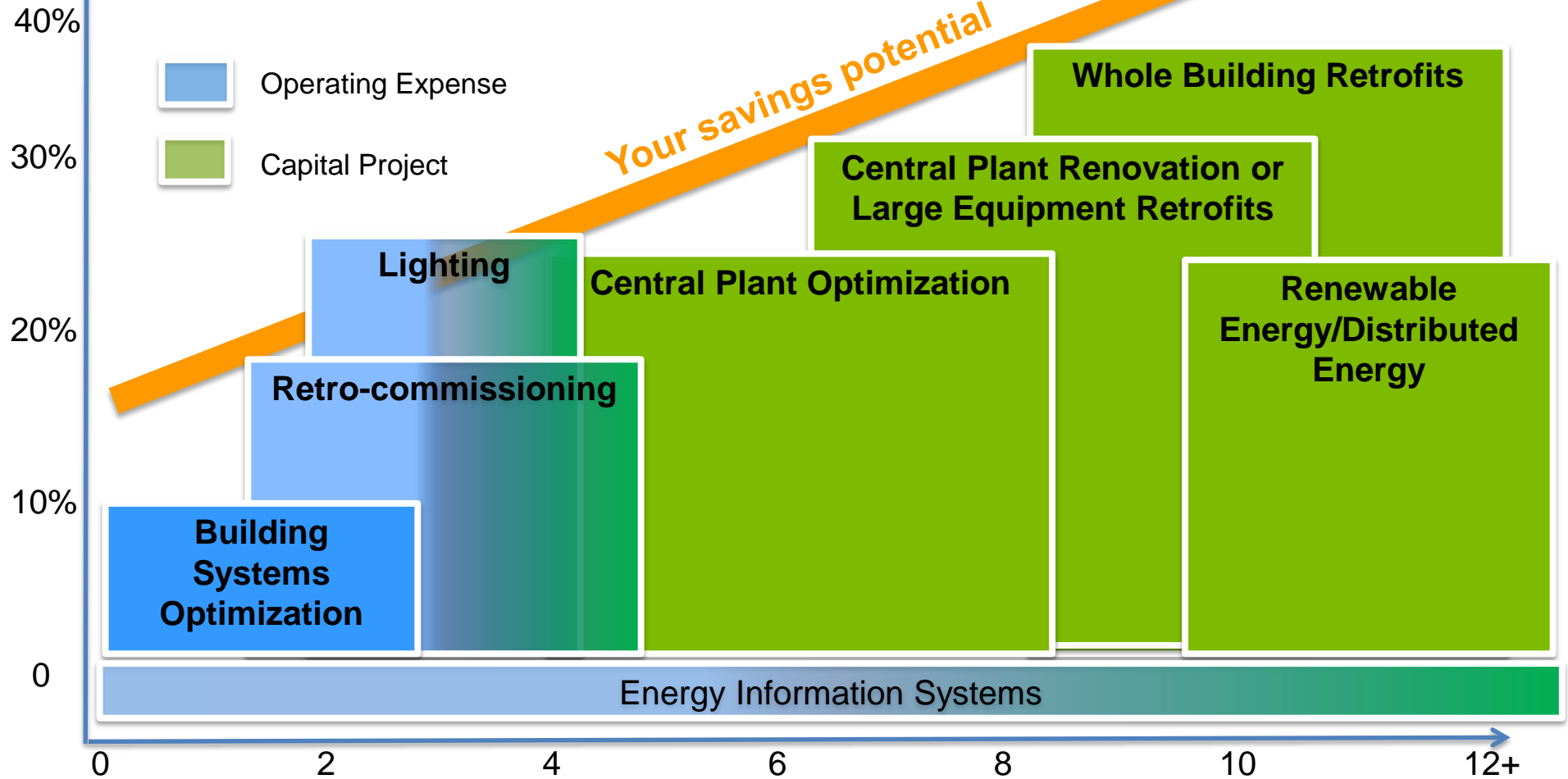


# Energy Efficiency Offsets: Permanent versus Responsive



# The Spectrum of Energy Efficiency Solutions: typical ranges of savings and simple paybacks

## Energy Savings Potential



## Typical Simple Payback (years)



# Needs and Challenges of Implementation Offsets

School Districts identify a need for energy efficiency measures and upgrades primarily to:



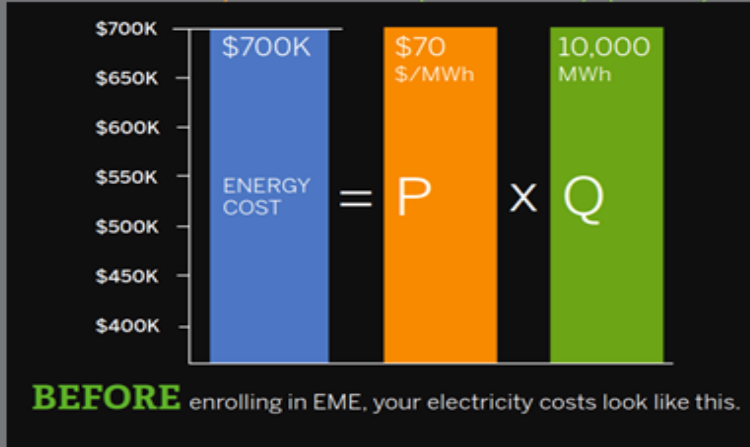
- ✓ Reduce operating costs
- ✓ Reallocate dollars saved towards schools urgent needs
- ✓ Support Sustainability Goals
- ✓ Achieve Compliance

But it has increasingly become more challenging to identify the best method for financing these projects.

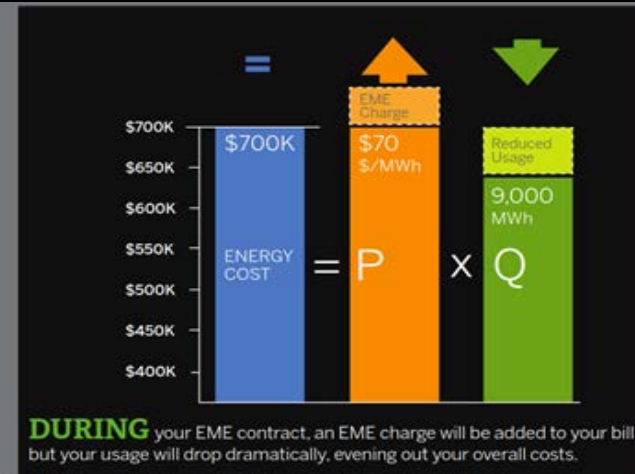
# Efficiency Made Easy (EME) – How Does It Work?

## Before EME

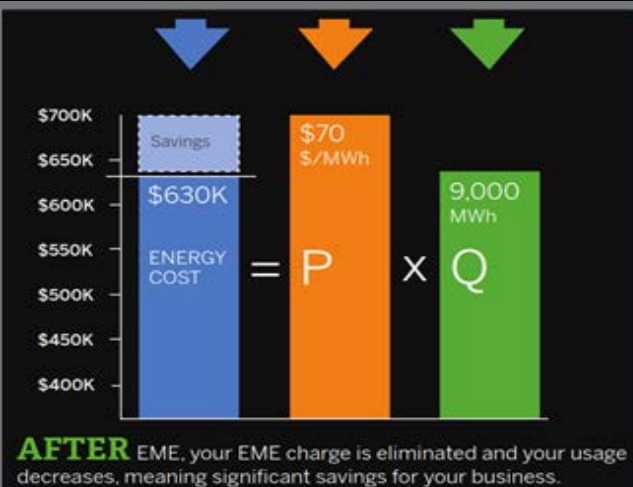
P = Electricity Price      Q = Electricity Quantity



## During EME



## After EME



## Benefits Summary

- Energy Savings
- Quantity Reductions
- Warranty Savings
- Maintenance Savings
- Greenhouse Gas (GHG) Savings
- No Upfront Capital Needed

# Stevenson University – EME Success Story

- <https://www.youtube.com/watch?v=jarAjtyP12k>

Stevenson University talks about upgrading aging infrastructure, reducing maintenance costs, and the impact on academic programs, faculty, and staff through Efficiency Made Easy.

# *Questions For Kim Weaver*

# Disclaimer

- The information contained herein has been obtained from sources which Constellation NewEnergy, Inc. and/or Constellation NewEnergy-Gas Division, LLC (collectively, “Constellation”) believes to be reliable. Constellation does not represent or warrant as to its accuracy or completeness. All representations and estimates included herein constitute Constellation’s judgment as of the date of the presentation and may be subject to change without notice. This material has been prepared solely for informational purposes relating to our business as a physical energy provider. We are not providing advice regarding the value or advisability of trading in “commodity interests” as defined in the Commodity Exchange Act, 7 U.S.C. §§ 1-25, et seq., as amended (the “CEA”), including futures contracts, swaps or any other activity which would cause us or any of our affiliates to be considered a commodity trading advisor under the CEA. Constellation does not make and expressly disclaims, any express or implied guaranty, representation or warranty regarding any opinions or statements set forth herein. Constellation shall not be responsible for any reliance upon any information, opinions, or statements contained herein or for any omission or error of fact. All prices referenced herein are indicative and informational and do not connote the prices at which Constellation may be willing to transact, and the possible performance results of any product discussed herein are not necessarily indicative of future results. This material shall not be reproduced (in whole or in part) to any other person without the prior written approval of Constellation.

# Efficiency Programs

- What is available to school districts?
  - Capacity Management
    - Use less power at just the right time and reduce next year's demand charges by thousands of dollars or more
  - Facility Management & ESCO Projects
    - NASA - \$3.0M/year savings
      - Lighting, backup power, boilers
    - Manatee County - \$2.0M/year savings
      - Central plant, lighting

# Examples of How Efficiency Programs Have Impacted Organizations

- Manufacturing plant
  - Implemented Capacity Management
    - Identified processes that could be performed at a later date
    - Curtailed load during exact forecasted time
    - Reduced cap tag by 14% from 20.4 MW to 18.4 MW
  - Resulted in annual savings of \$213,326

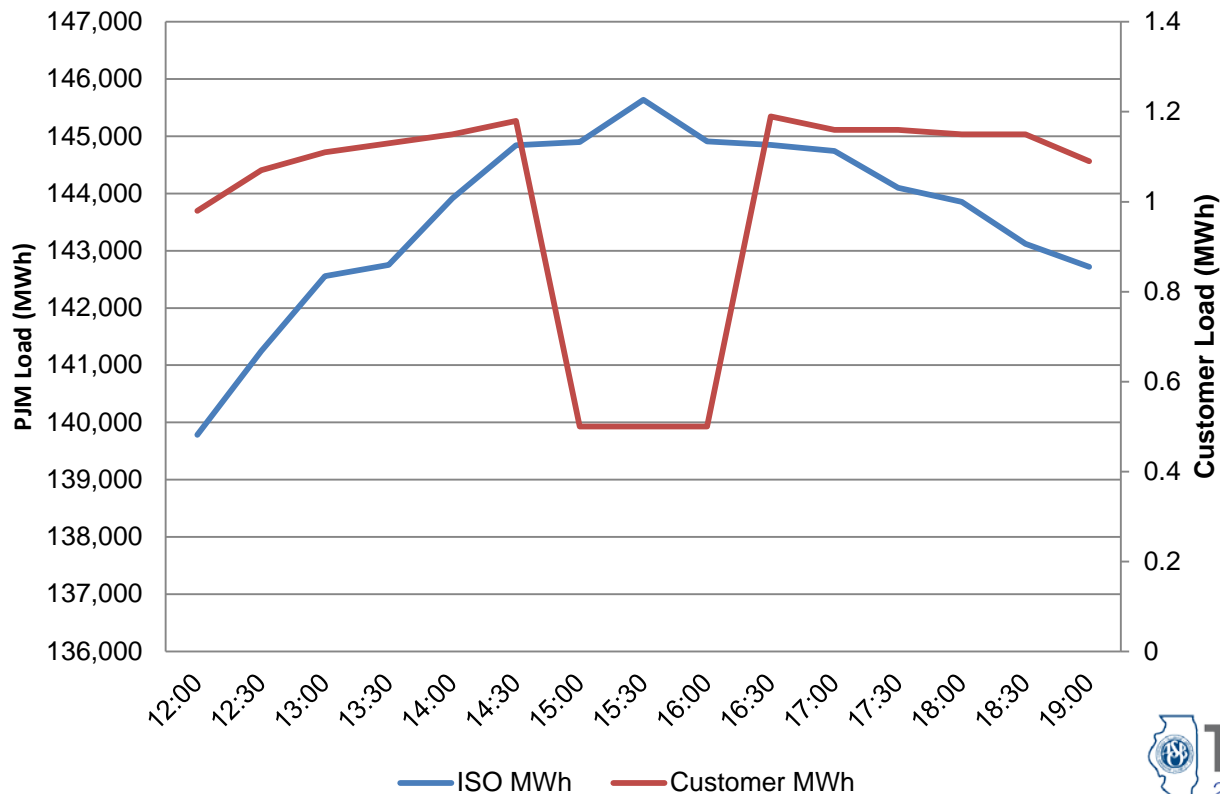
# What is “Capacity?”

- The charges you pay to power generators in order for them to reliably power the grid
- It is a demand-based charge involving several elements:
  - Price for capacity, in \$/MW-day
  - Quantity for capacity: your capacity tag
    - Determined by your demand during the hour when the grid’s total demand peaks
    - Known as your coincident peak



# What is “Capacity?”

- From June 1 (6/1/18) thru September 30 (9/30/18)
  - If you can predict the five (5) hours during which PJM’s load will peak, and...
  - You can curtail your load by X %, then you can reduce the QUANTITY of capacity you’re charged for by the grid starting next June (6/2019)



# Can you save on capacity?

- Depends on your current contract structure
  - Fixed capacity?
    - May not be available to you
  - Pass-through capacity?
    - Yes: capacity management starting in June 2018 will save on costs beginning in June 2019

# *Questions For Dave and Josh*

# Presenters:

## PANELISTS INFO:

Kim Weaver, Efficiency Made Easy Specialist, Constellation, 312-965-6546,  
[Kim.Weaver@constellation.com](mailto:Kim.Weaver@constellation.com)

Glen Grimm, Senior BDM, Constellation and Illinois Energy Consortium,  
630-657-4455, [glen.grimm@constellation.com](mailto:glen.grimm@constellation.com)

Dr. David Thieman, Senior Business Development Executive, NextEra Energy and  
Illinois Energy Consortium, Phone: 708-525-4426  
[david.thieman@nexteraenergyservices.com](mailto:david.thieman@nexteraenergyservices.com)

Joshua Stone, Senior Product Manager; NextEra Energy  
713-401-5568; [joshua.stone@gexaenergy.com](mailto:joshua.stone@gexaenergy.com)