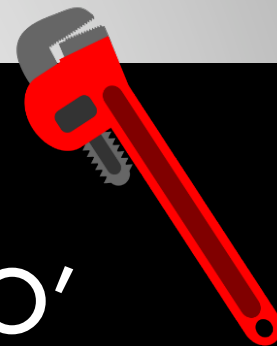


**FIXED**

**BREAK**



IF IT AIN'T ~~BROKE~~, DON'T ~~FIX~~ IT?

# OBSERVATIONS FROM SEA'S 'REMO' NEW ENGLAND 'CLASS I' REC MARKET ANALYSIS

**Bob Grace**

**New England Electricity Restructuring Roundtable (#153)**

March 24, 2017



Sustainable  
Energy  
Advantage, LLC



# What is REMO?

## Renewable Energy Market Outlook

- Much more than just a forecast... A market outlook on the New England market for new (Class 1) renewable energy credits
- Since 2005 → 3x/yr subscription briefing
- On results of our extensive analysis of... Supply, demand, drivers, risks, scenarios, price implications for each state's intertwined market =
- A detailed fundamentals analysis conveying a deep understanding of complex marketplace



Market shifts visible before they show up in the broker forwards



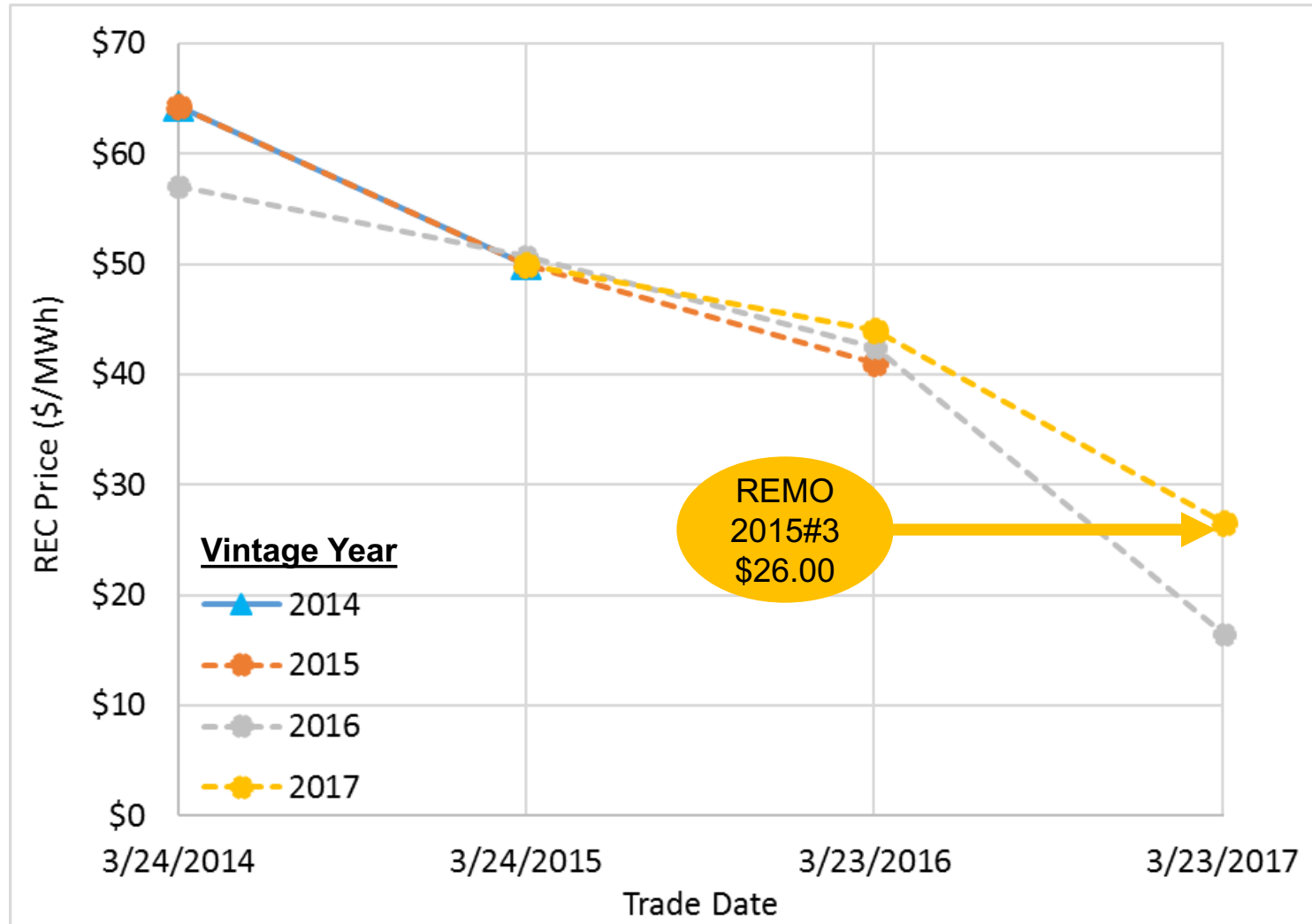
# Who uses REMO?



Diverse audience with differing commercial interests = freedom to conduct objective analysis

# The REC Market has Changed

## Evolution of Recent Broker Forwards



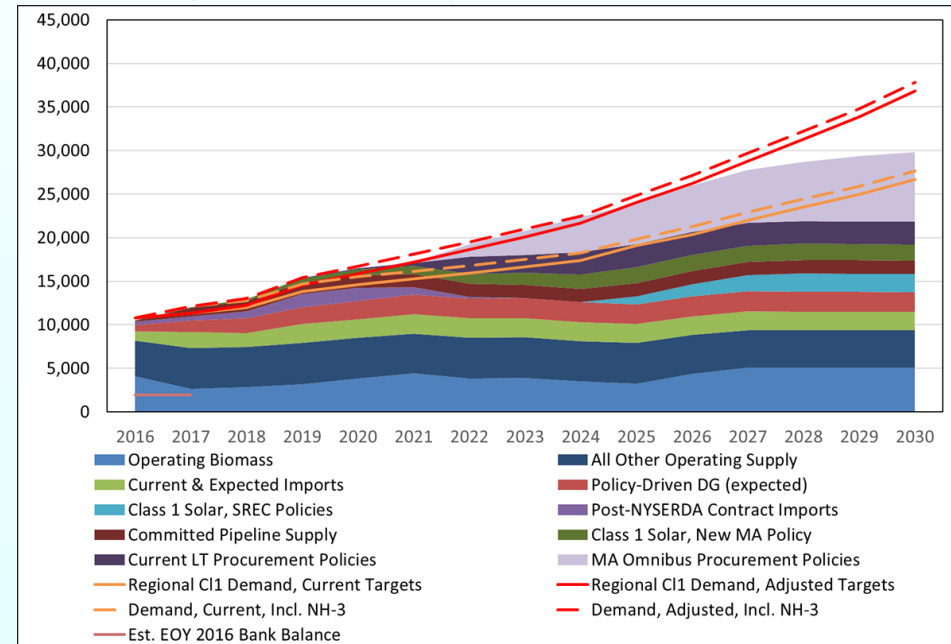
# Dec. 2016 Analysis Went Like This

**DANGER!**

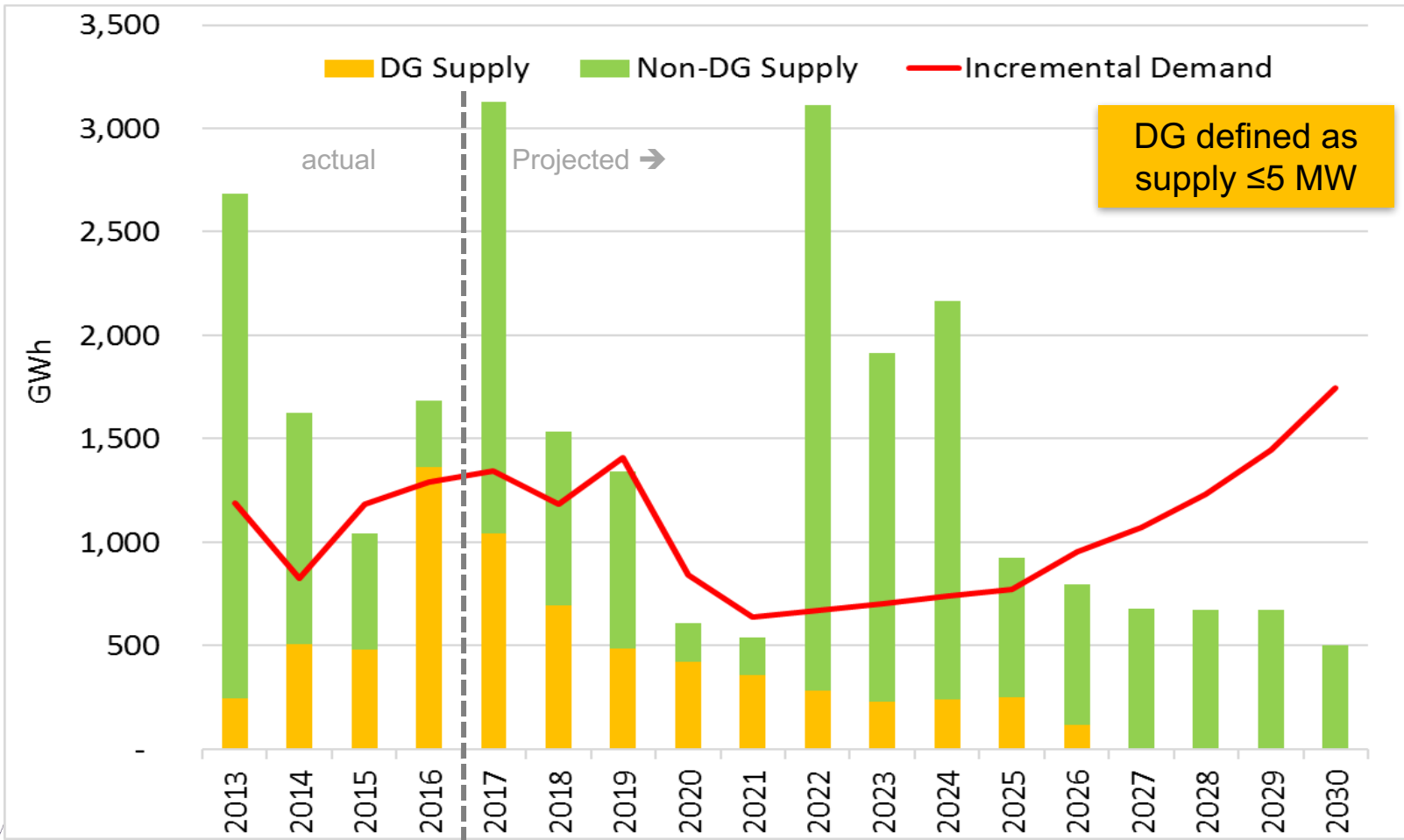
This type of analysis should only be performed by a qualified professional.



## Regional Supply-Demand Balance



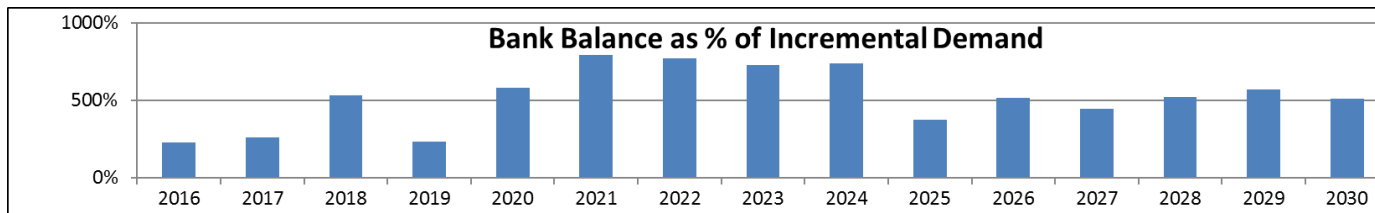
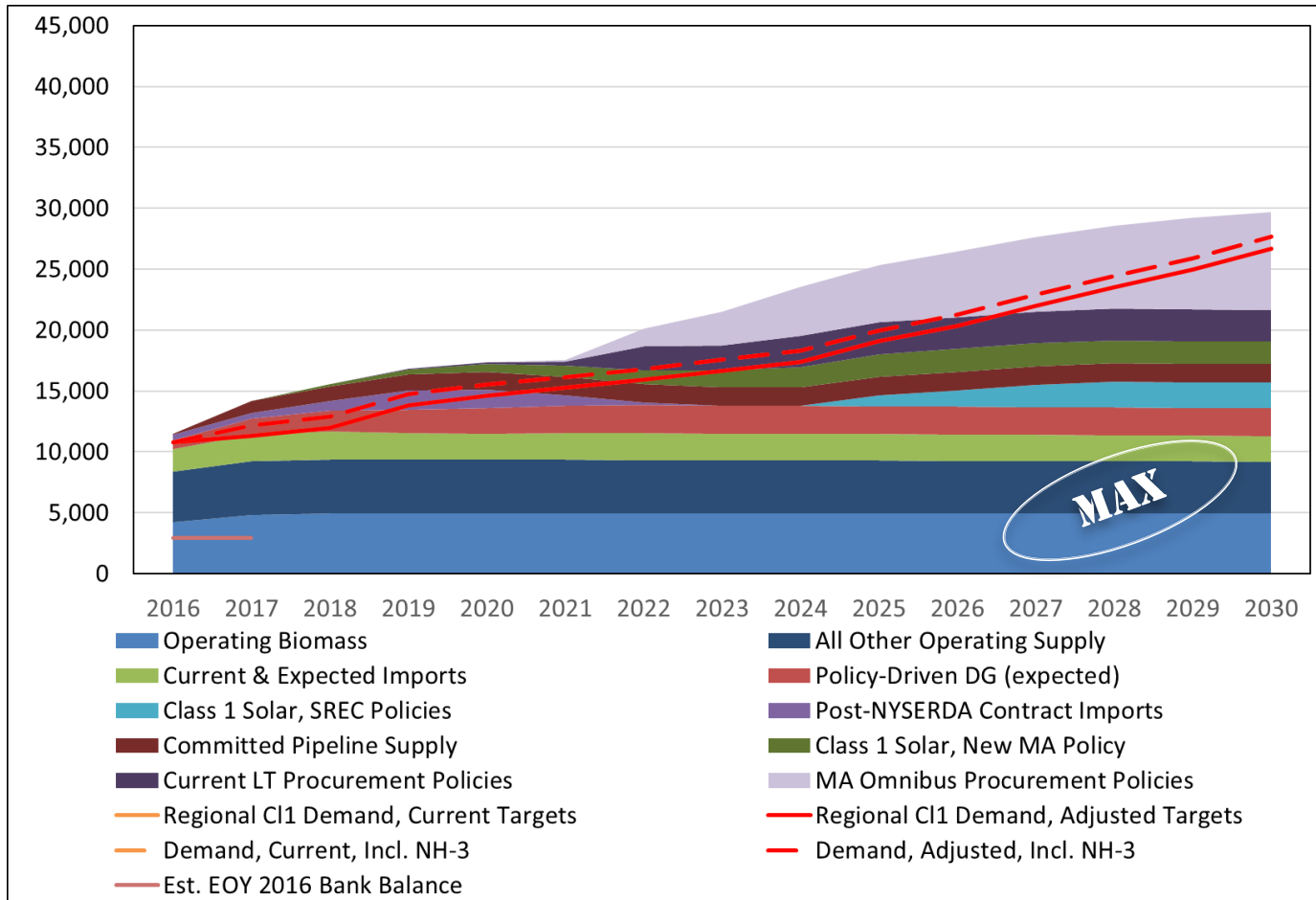
# Year-over-Year Incremental Supply DG vs. Non-DG vs. Incremental Demand



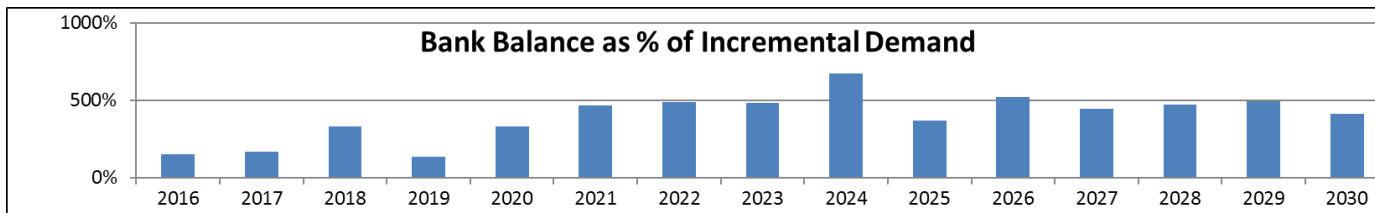
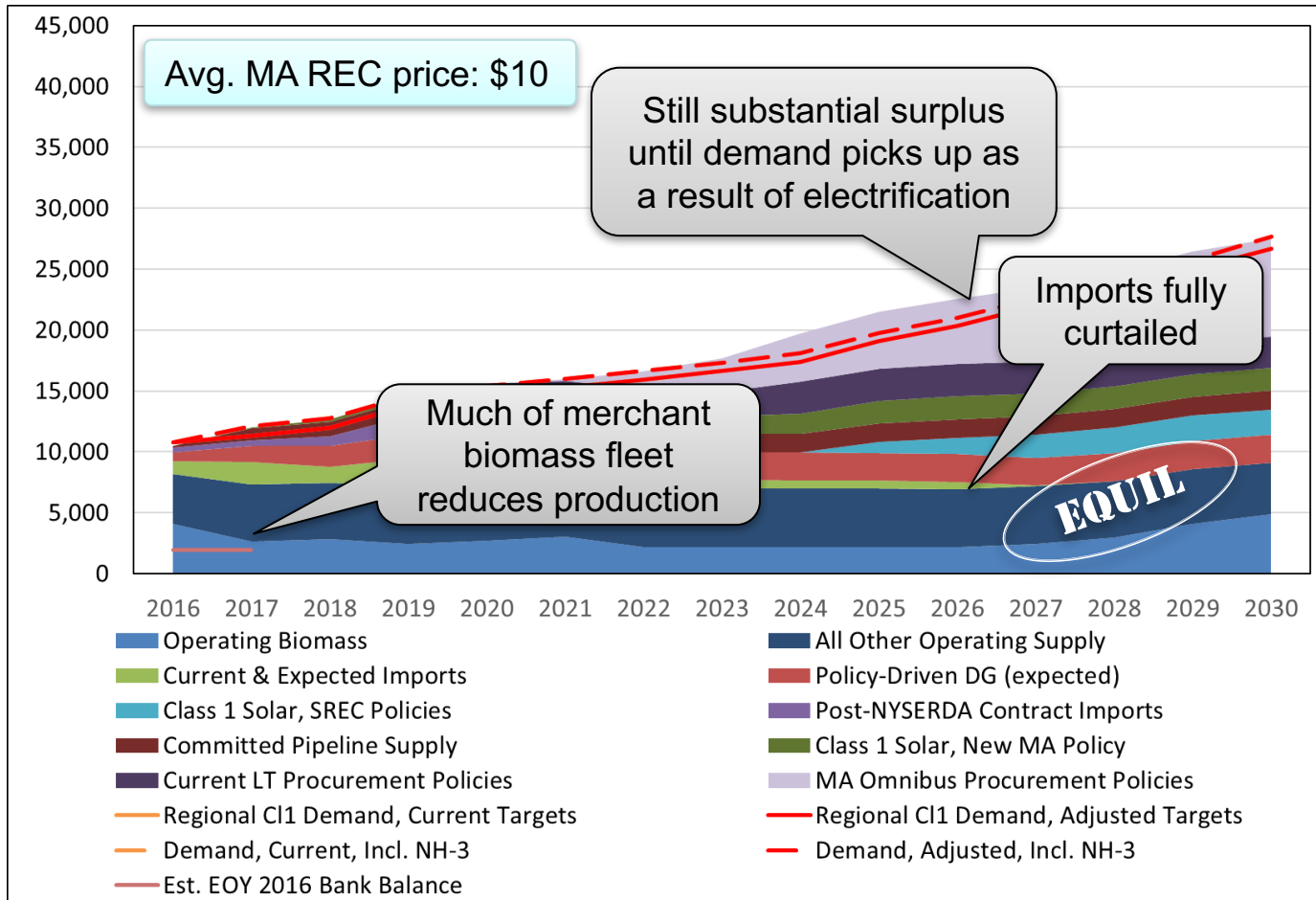
Reflects current statute & policy, including MA SRECs & SMART  
Assumes MA 83D = 70% hydro, 30% Class I



# Business as Usual (BAU)



# Business as Usual





# What May Alternative Futures Look Like?

## REMO 2016#3 Case Map

### Cases

### Sensitivities

Business as Usual

#### RPS Demand Boost

- MA: 2% RPS increase starting 2018
- CT: 1% RPS increase starting 2021

#### MPN

- New York adopting policy to retain legacy supply following 2020 triennial review

#### RPS Demand Boost

- MA: 2% RPS increase starting 2018
- CT: 1% RPS increase starting 2021

#### LPN

- New York adopting policy to retain legacy supply in late 2018, effective in 2019

#### MA CES

- MA: CES (starting 2018) behaves as Class I surplus absorption capacity
- CT: 1% RPS increase starting 2021

#### MPN

- New York adopting policy to retain legacy supply following 2020 triennial review

#### Robust Supply

- High MA SREC-II & SMART supply
- CT LREC/ZREC extension
- RI REGrowth extension
- ME Solar
- High CERFP/DG PPA success

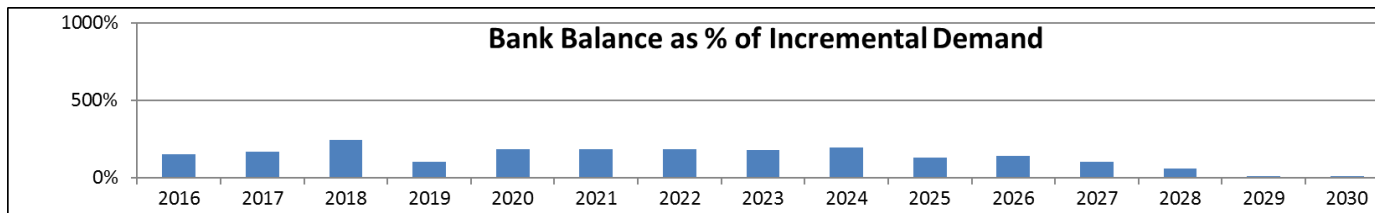
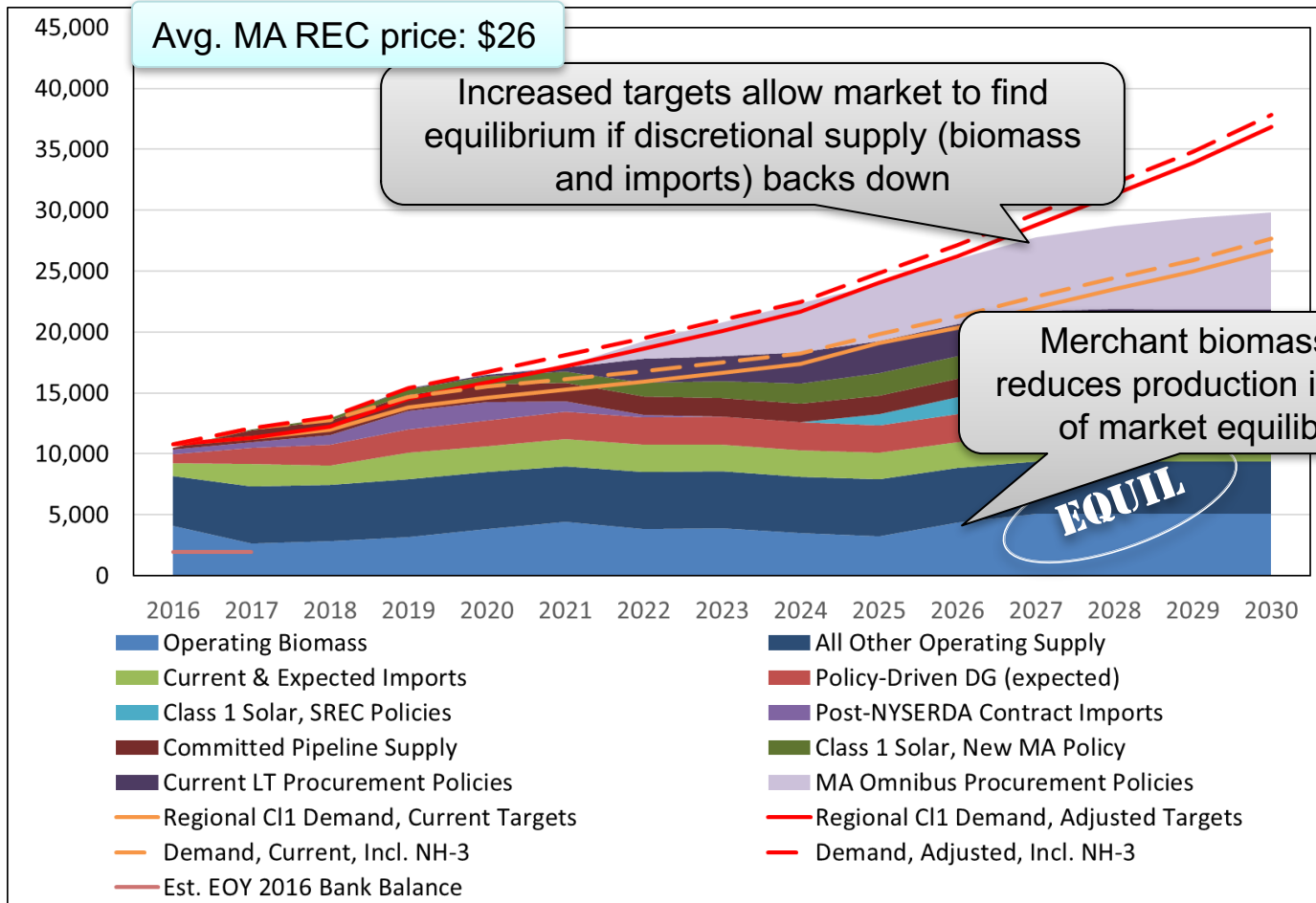
#### Supply Constrained

- Low MA SMART supply
- Less contracted MA 83D Class I procurement (more large hydro)
- Less contracted MA 83C OSW supply
- Low CERFP/DG PPA success
- Transmission network upgrade delays

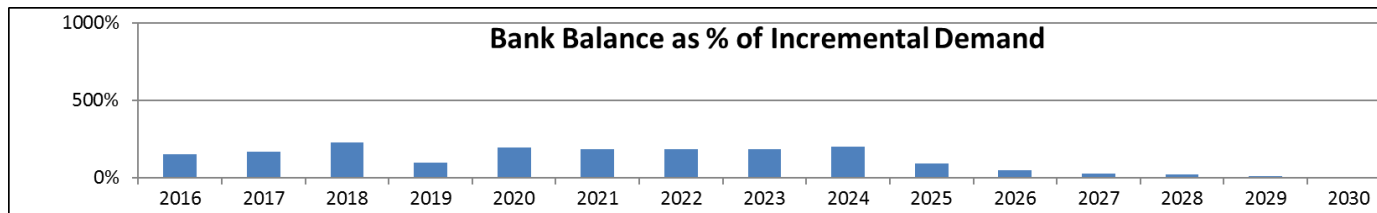
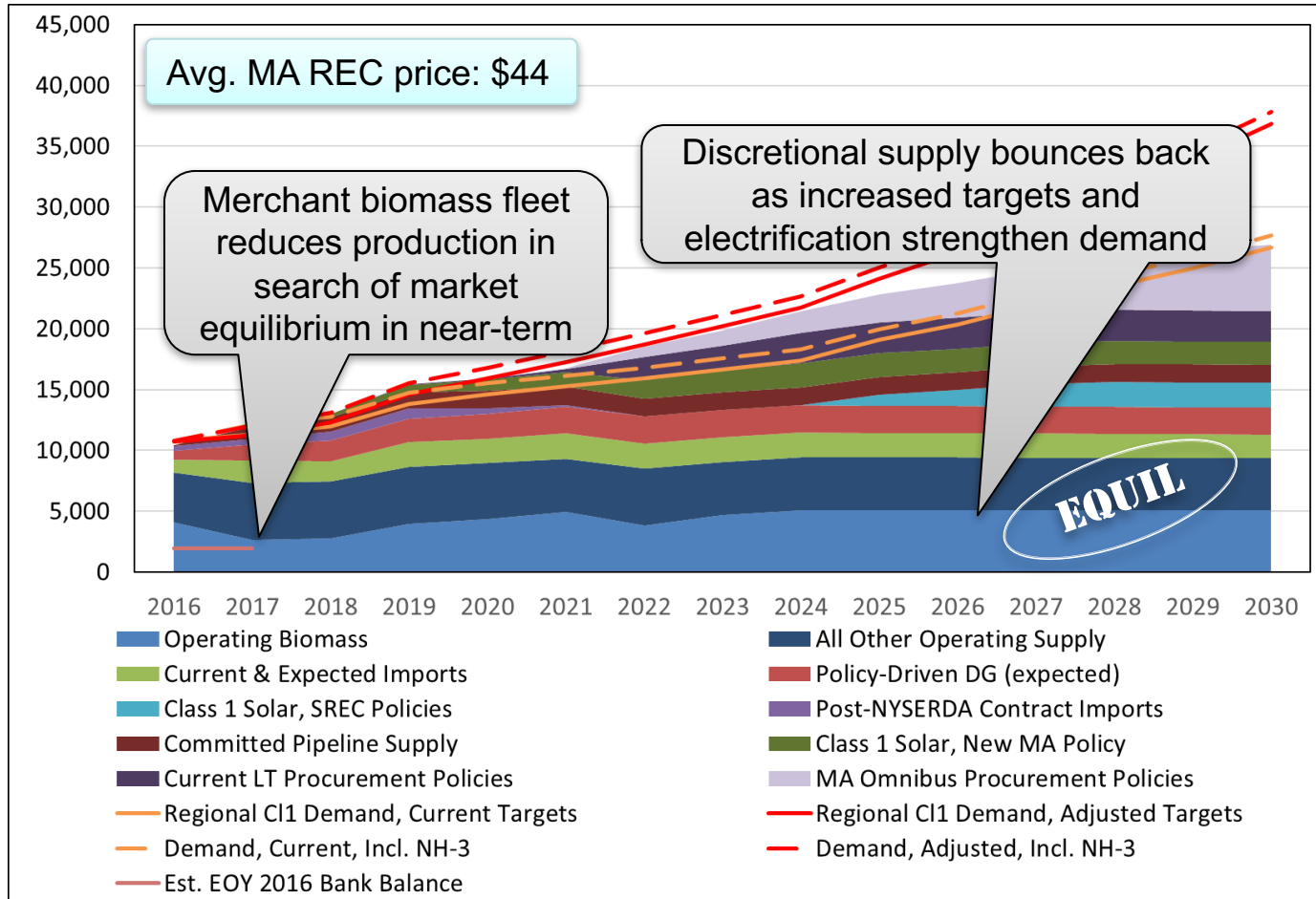
Red outline = cases presented today



# RPS Demand Boost; MPN

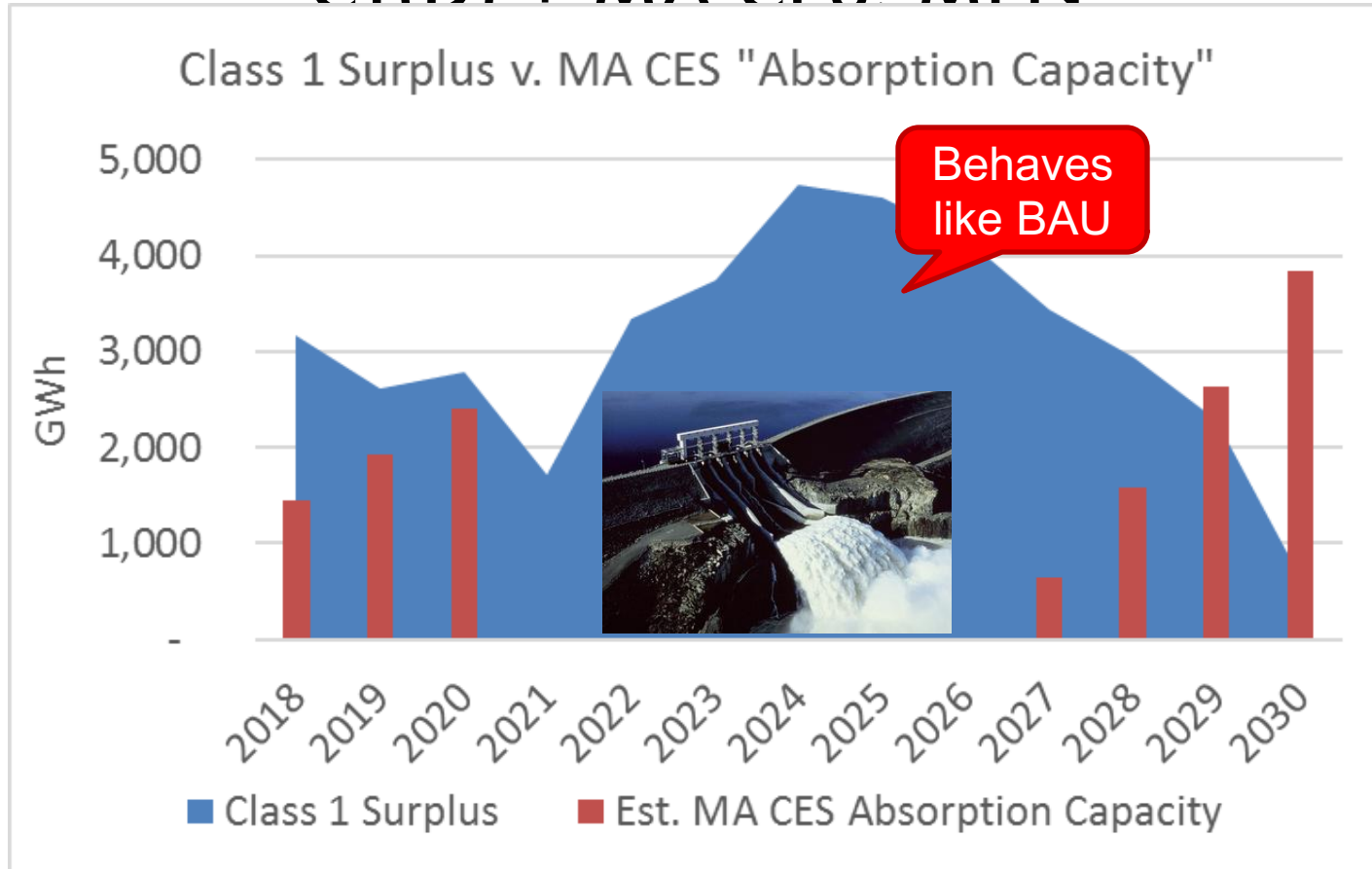


# RPS Demand Boost + Constrained Supply

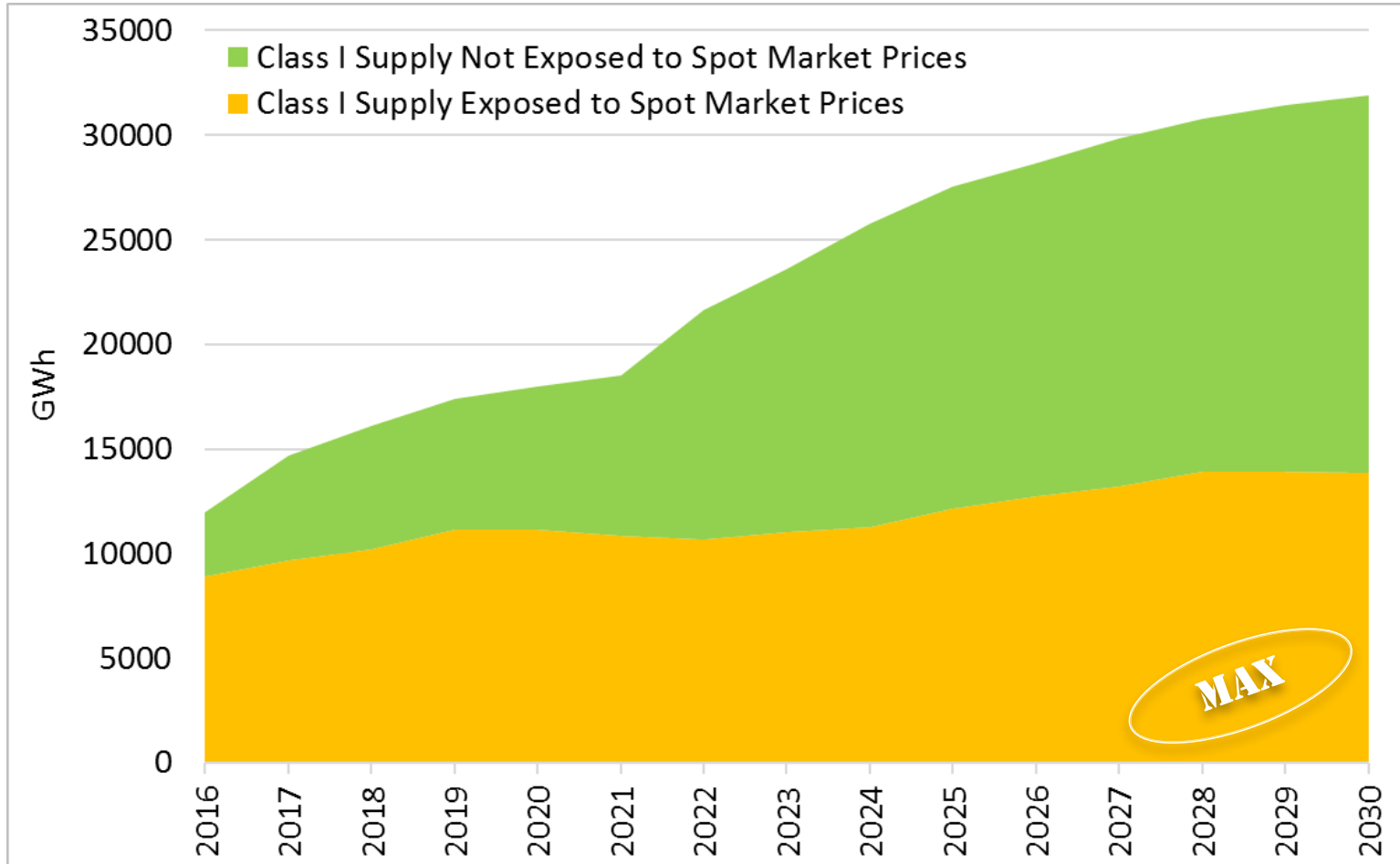


# Estimating MA CES 'Surplus Absorption Capacity'

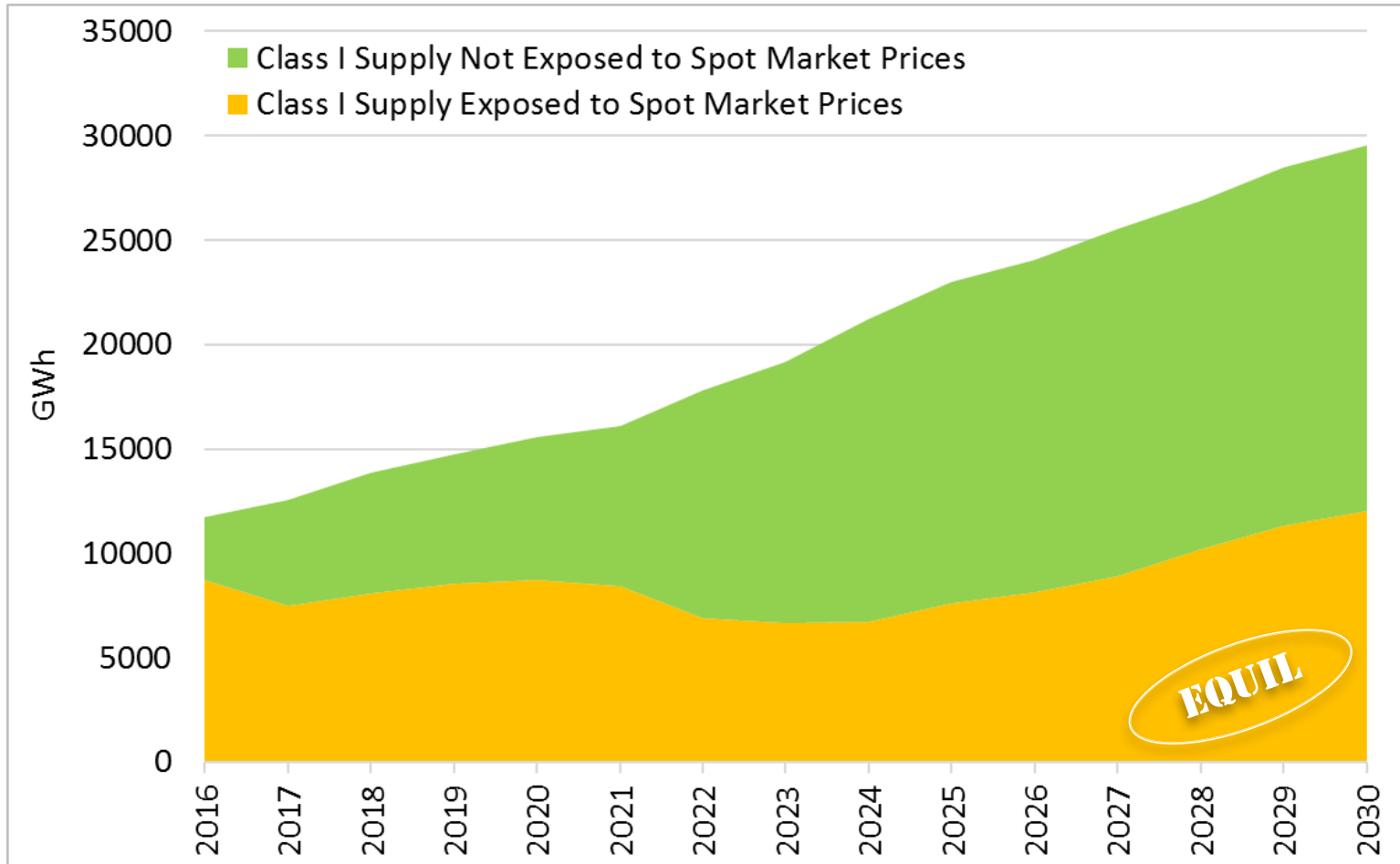
## CT(D) + MA CES · MPN



# BAU Hedged vs. Merchant Supply



# BAU Hedged vs. Merchant Supply



# Conclusions/ BAU Implications

- When procurement >> targets, implications for...
  - Ratepayers
    - LT contract hedges → stabilize cost and insure against high cost future
    - But oversupply does not result in huge RPS compliance cost savings (shift costs to wires charges as EDCs sell for large loss)
  - Generators
    - Competitive procurements/LT contracts → important to getting new RE projects financed and built at lowest cost (in each 'bucket')
    - Merchant plants accepted market risk... got an extra helping of policy risk for free
  - Policy/Targets
    - Extra procurement shuts down RE → and require more NG
    - Surplus RECs, and associated benefits, flow to other states
- RPS is a market policy
  - Does the BAU look like a market?
  - Does the regional BAU make any sense?





# Questions and Comments



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