

# Market Monitoring Unit

Spring 2019

Quarterly Report



SouthwestPowerPool



SPPorg

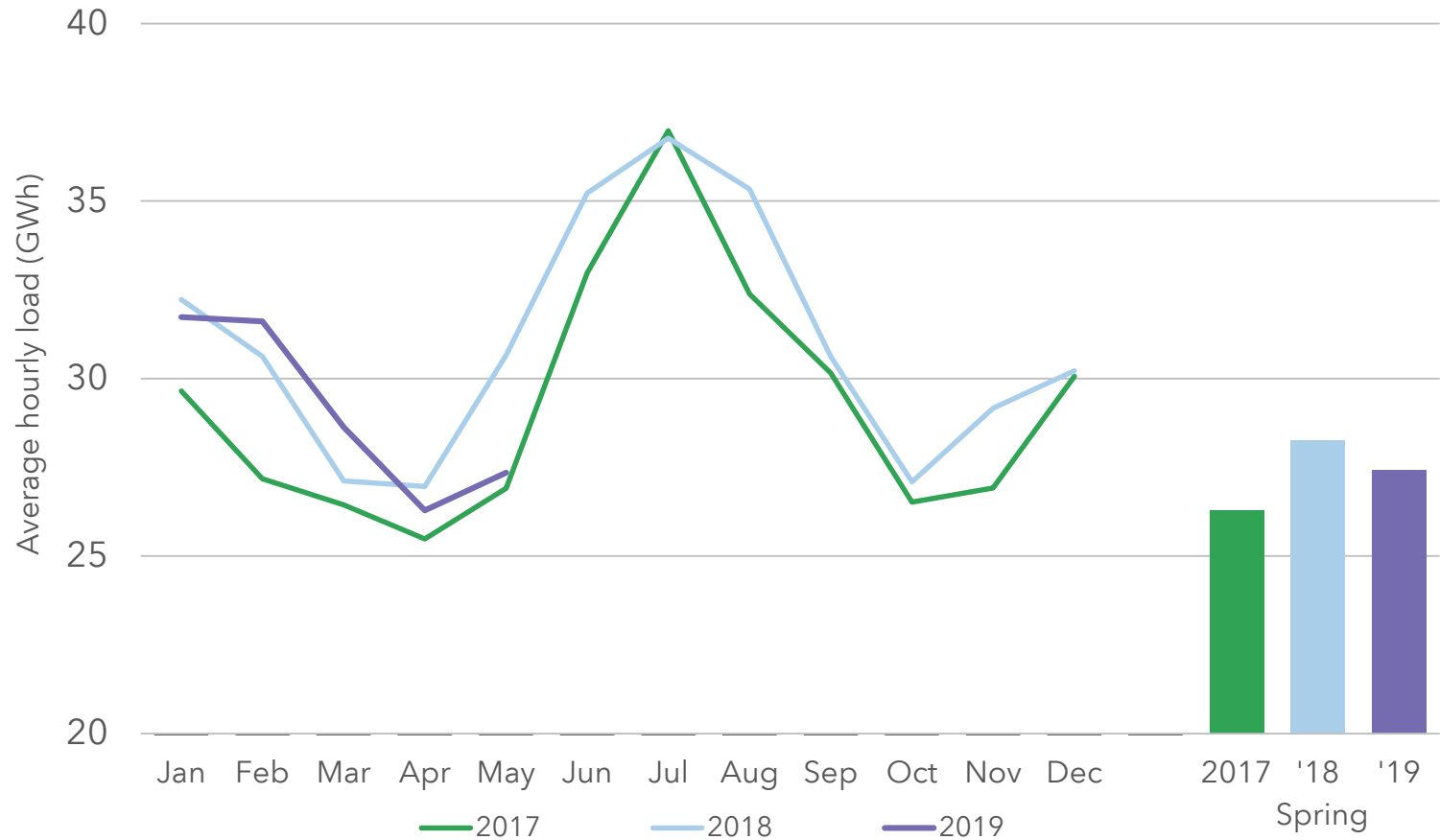


southwest-power-pool

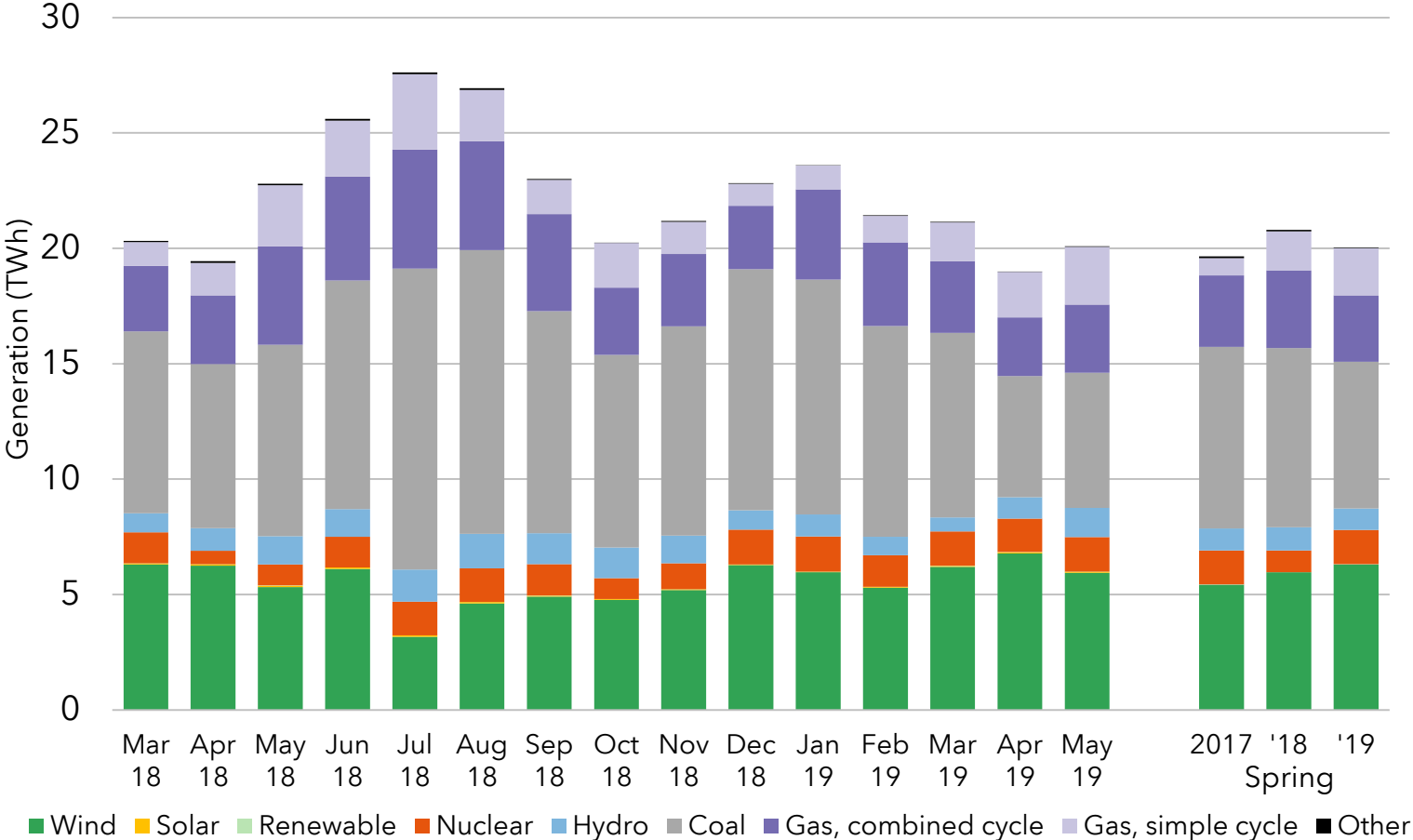
# Spring 2019 highlights

- Load declined
- Congestion and outages increased
- Prices increased, while gas cost remained flat
- Coal generation continued to decline; wind continued to grow
- Study of variability in congestion hedging profits and losses

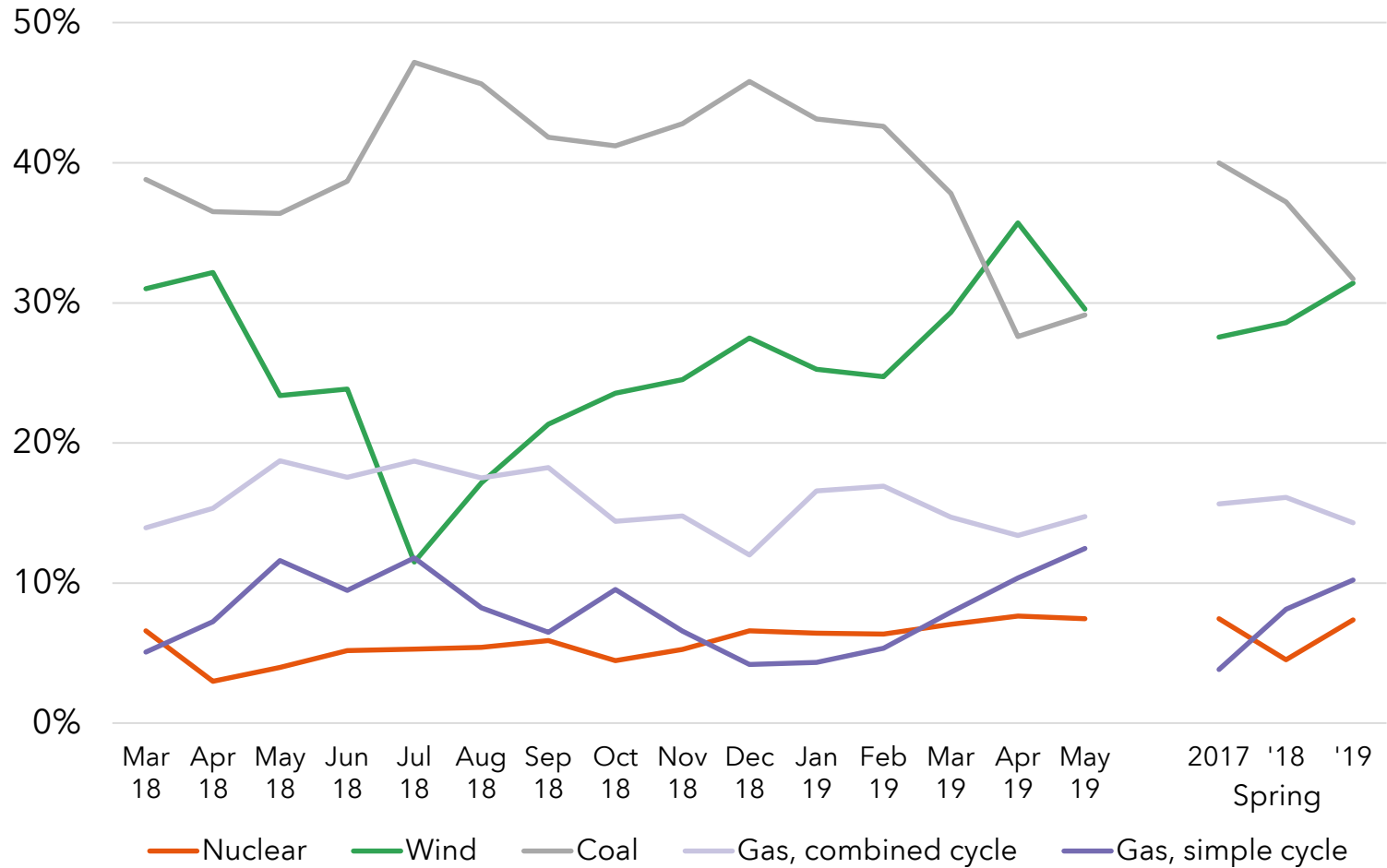
# Overall load declined



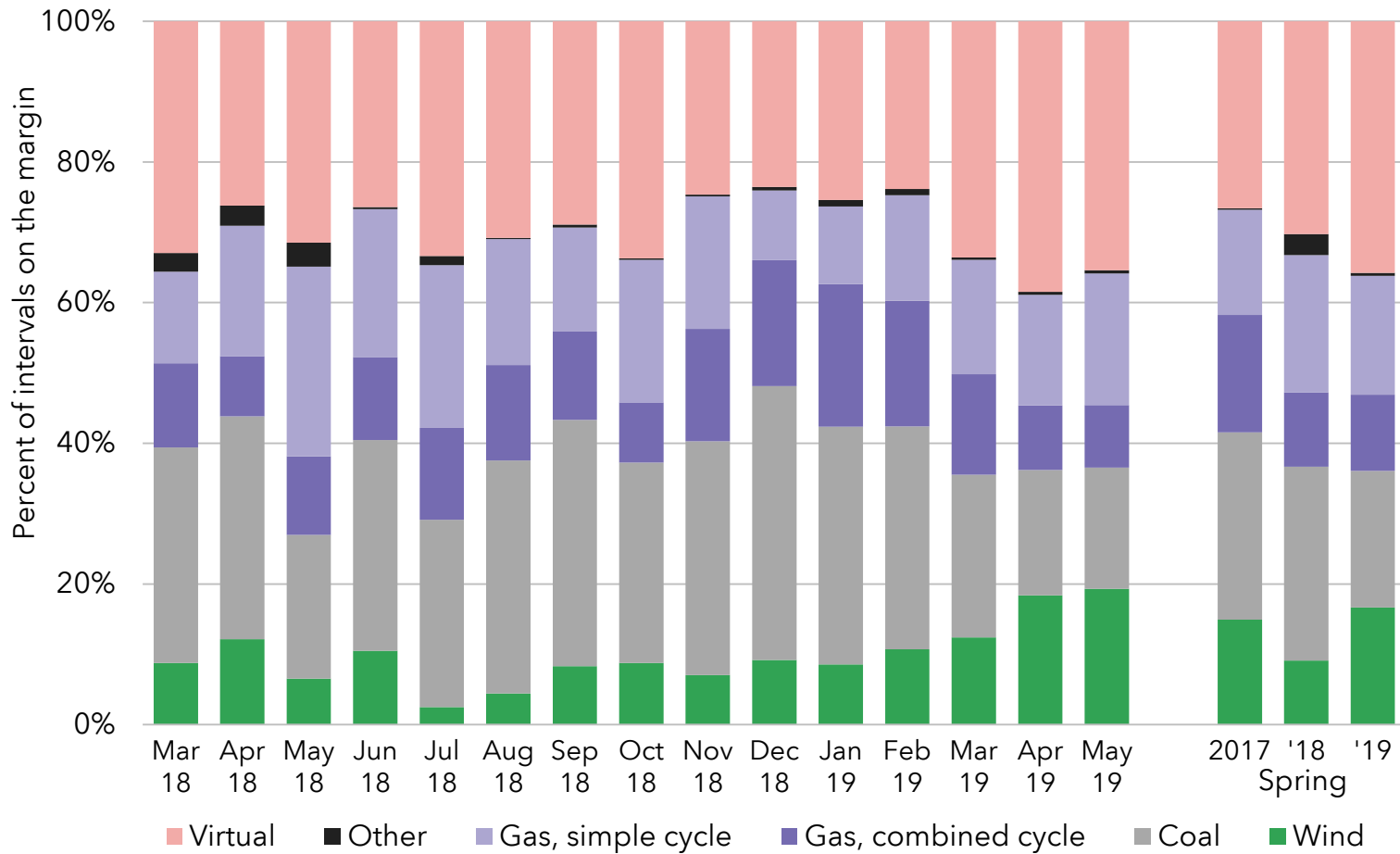
# Generation declined



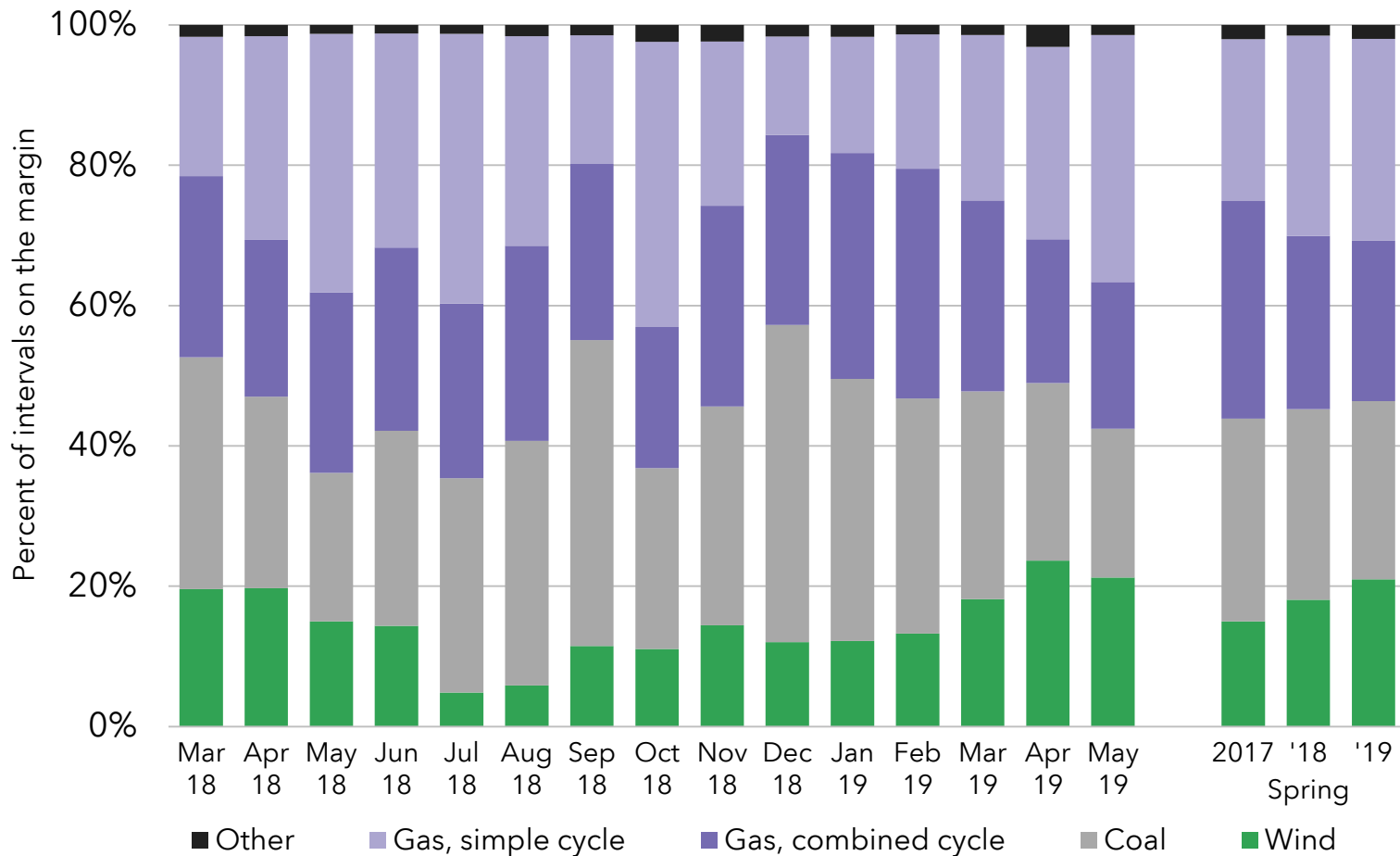
# Coal generation declining



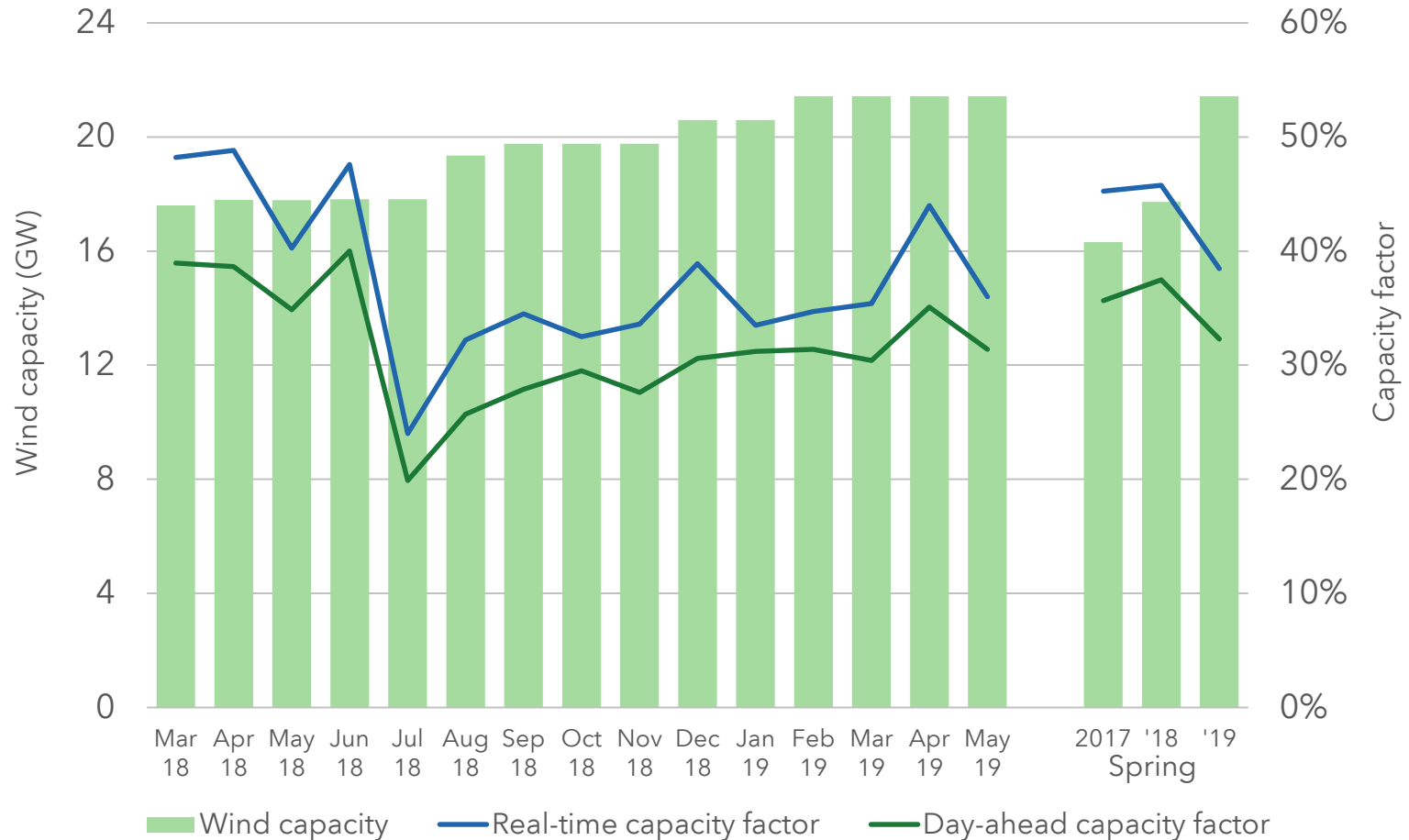
# Virtuals setting prices more frequently in day-ahead



# Wind setting prices more frequently in real-time

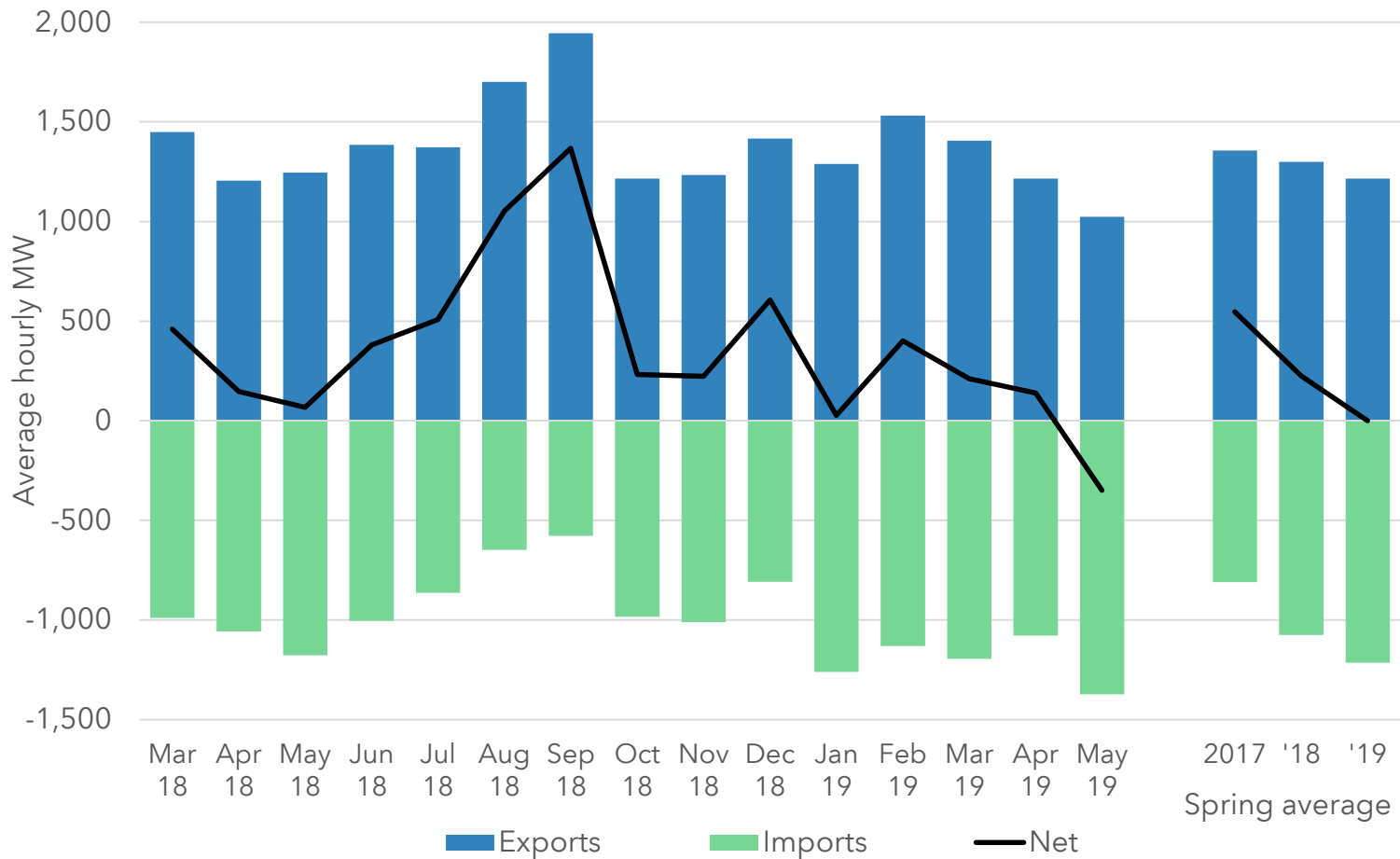


# Wind capacity continues to grow

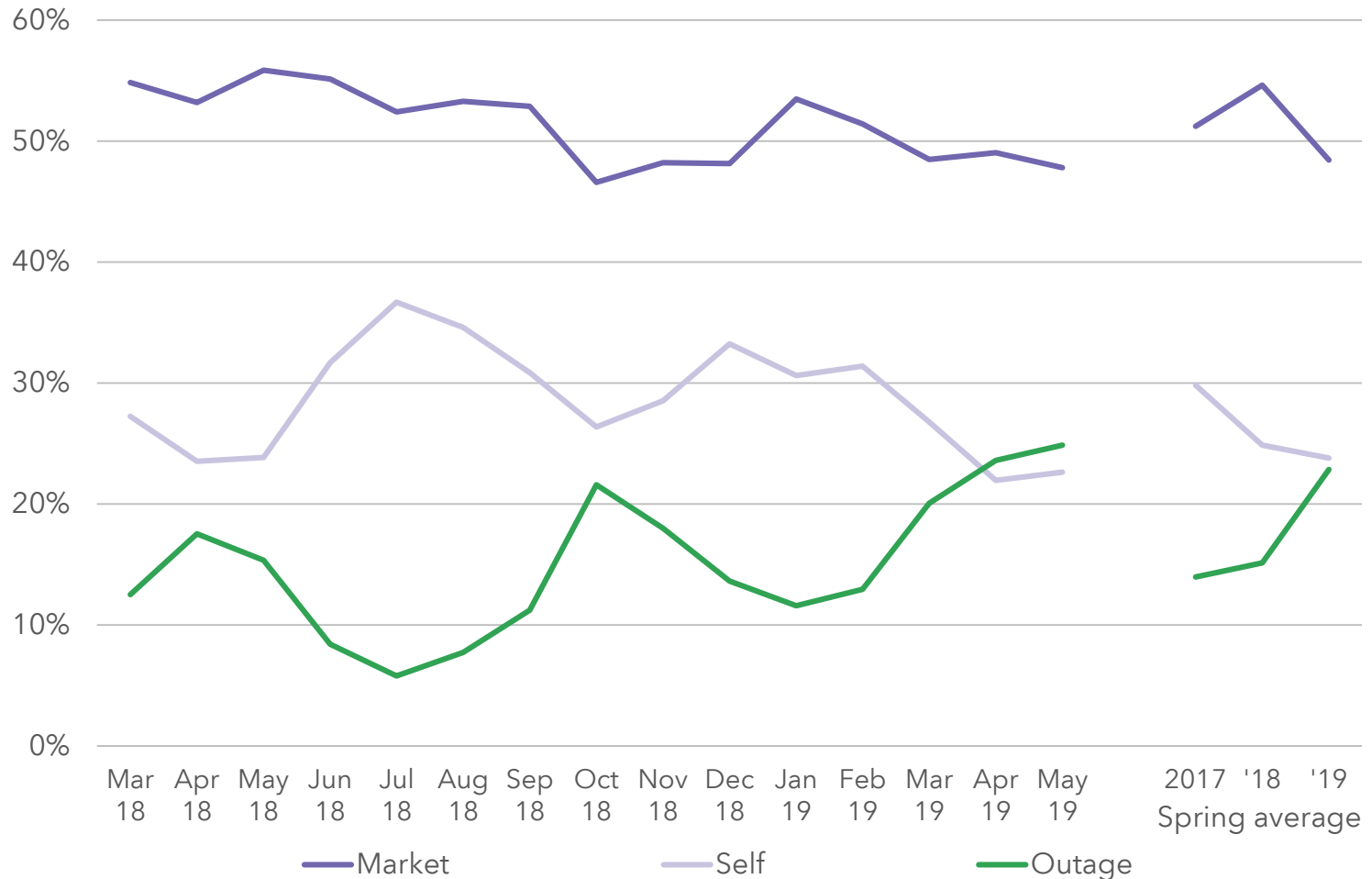




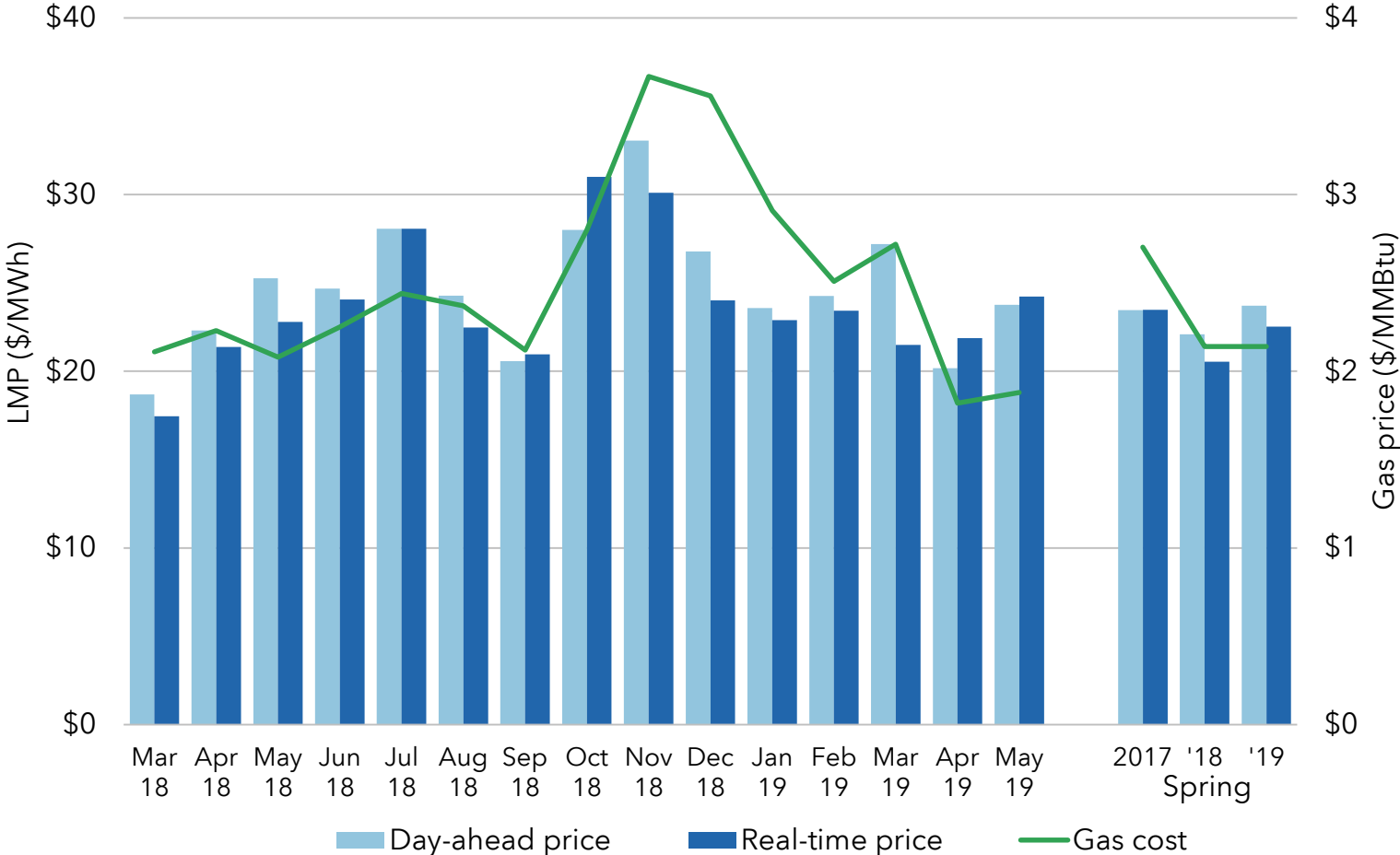
# Imports have increased, while exports have decreased



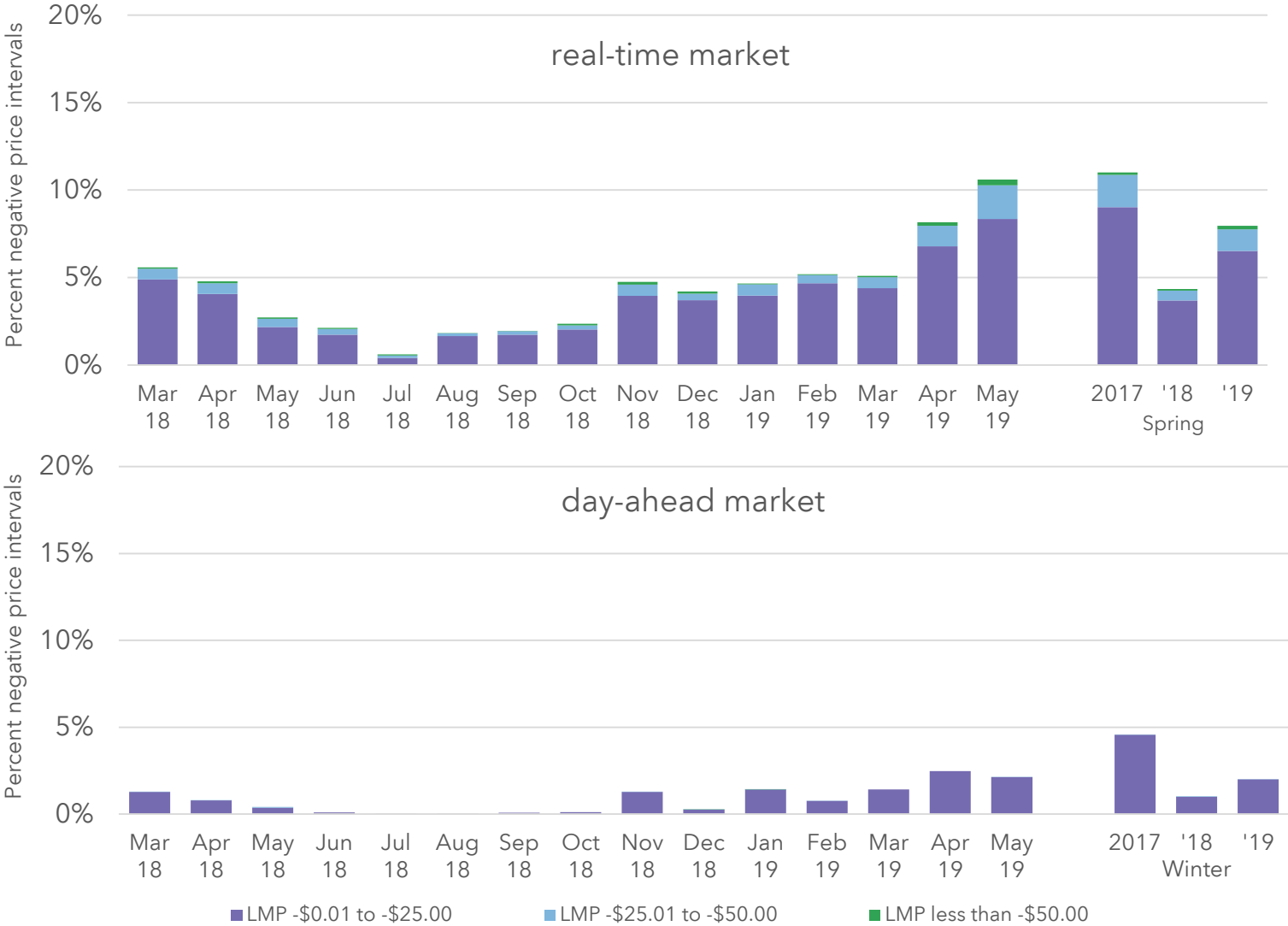
# Outages have increased, self-commits have decreased



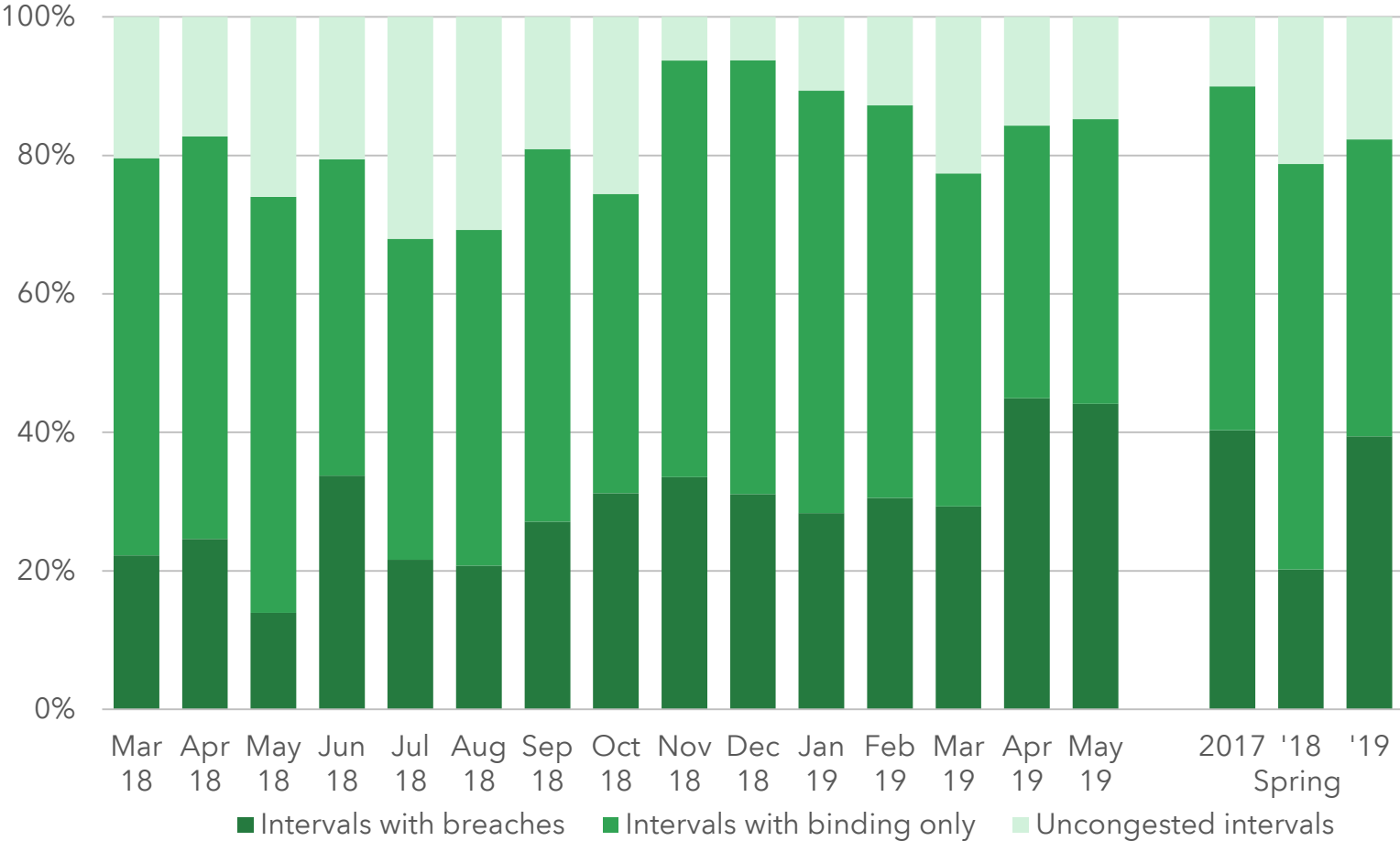
# Prices climbed



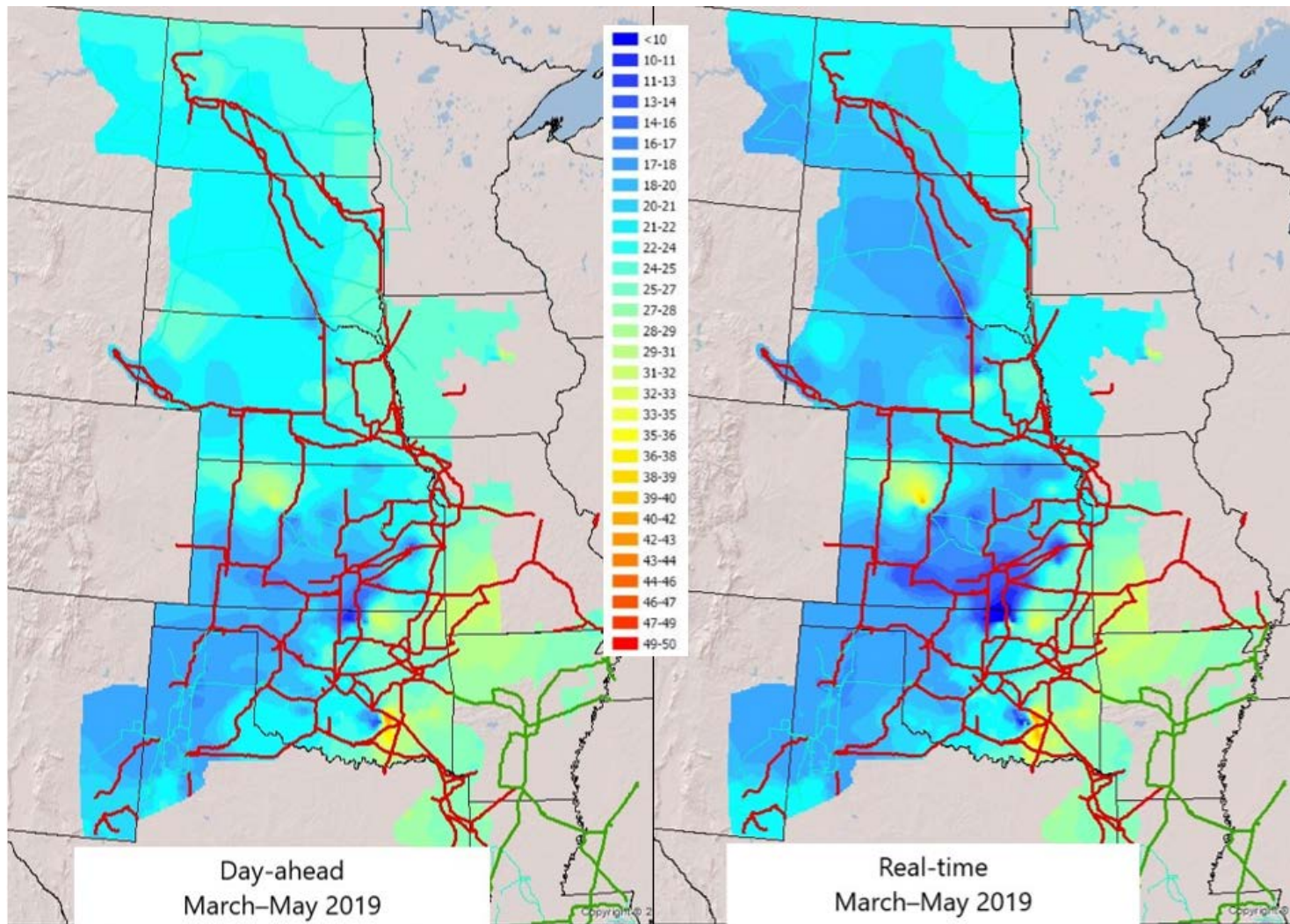
# Negative price intervals increased



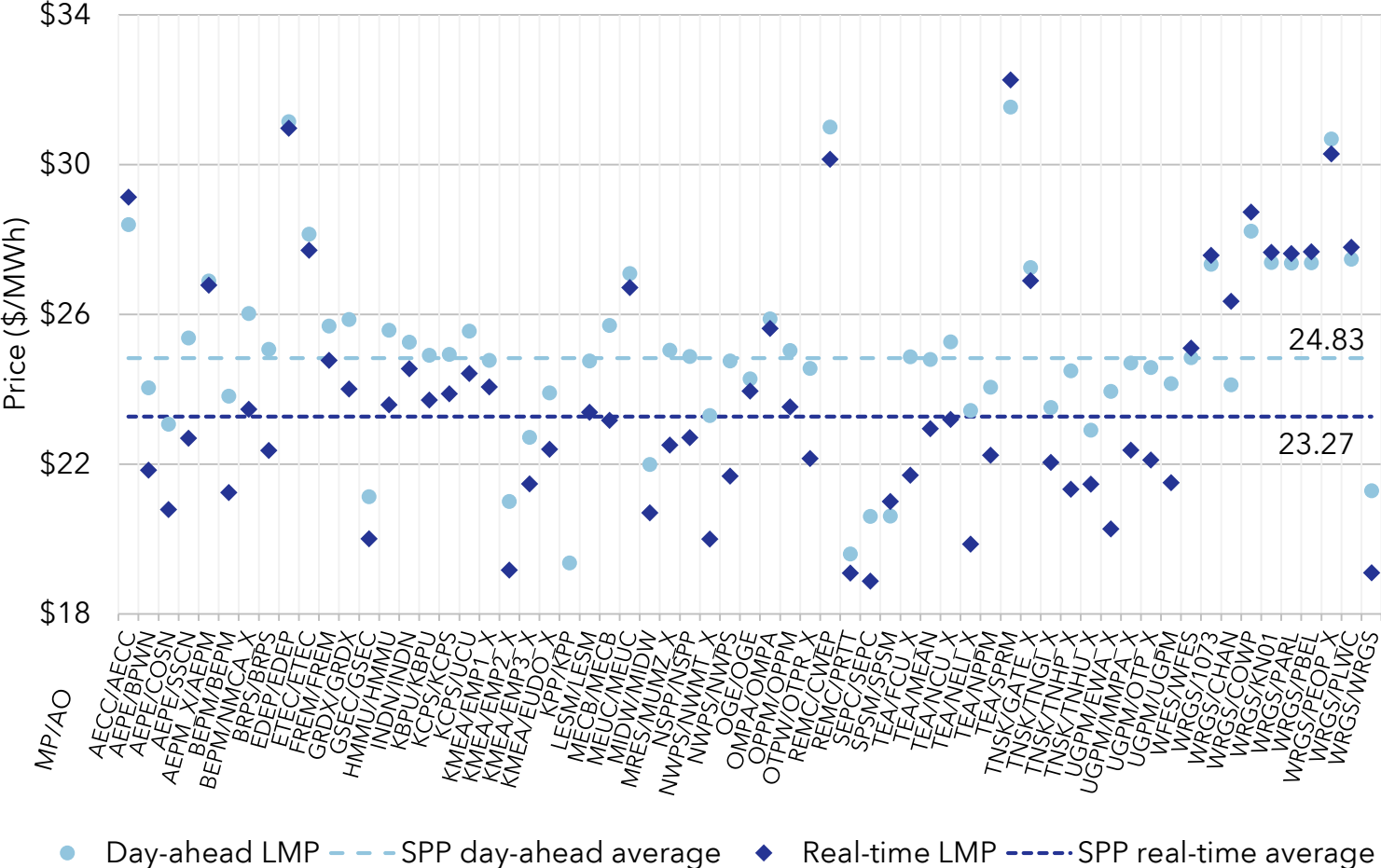
# Breached intervals increased



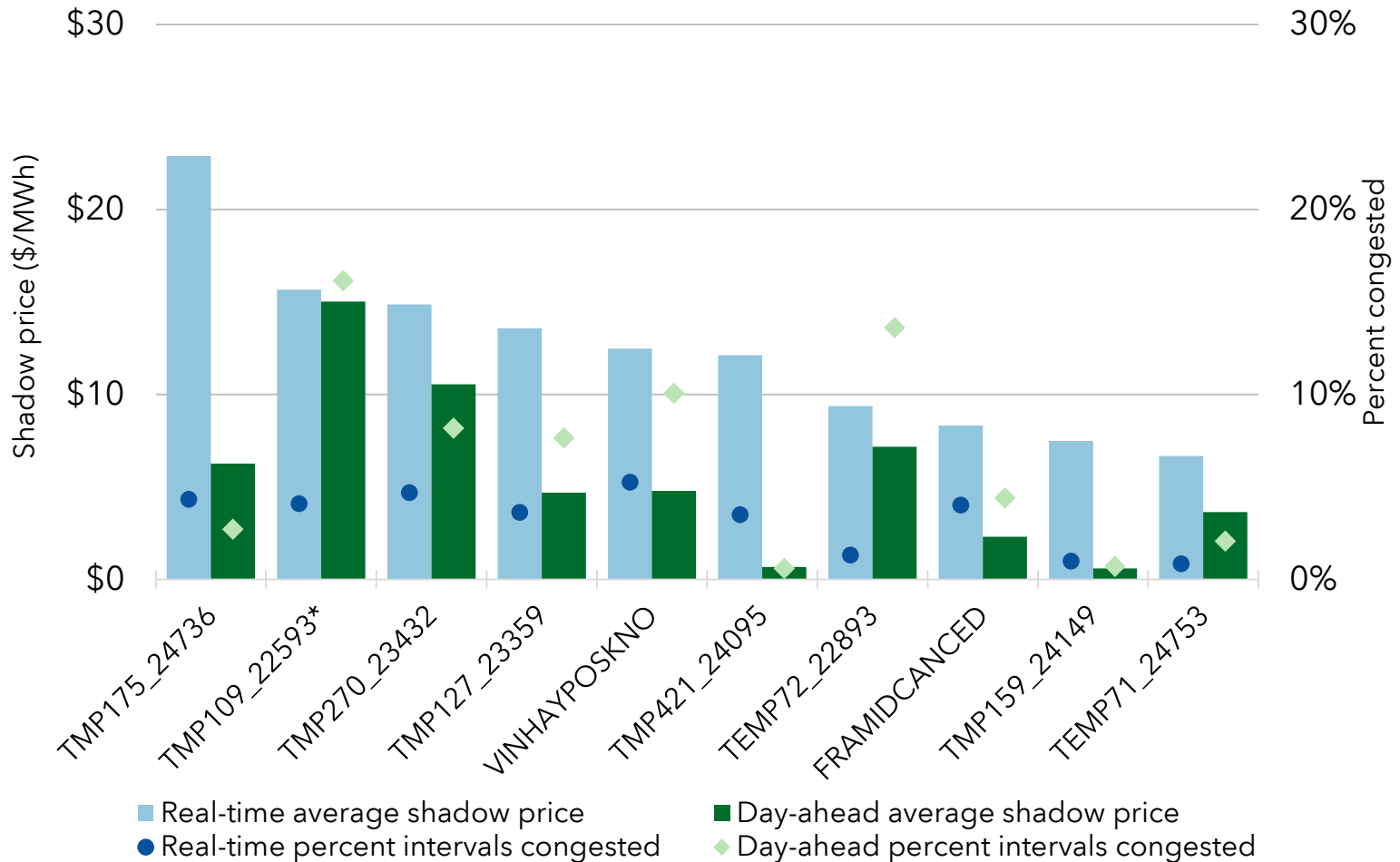
# Congestion pattern similar between markets



# Prices vary across footprint

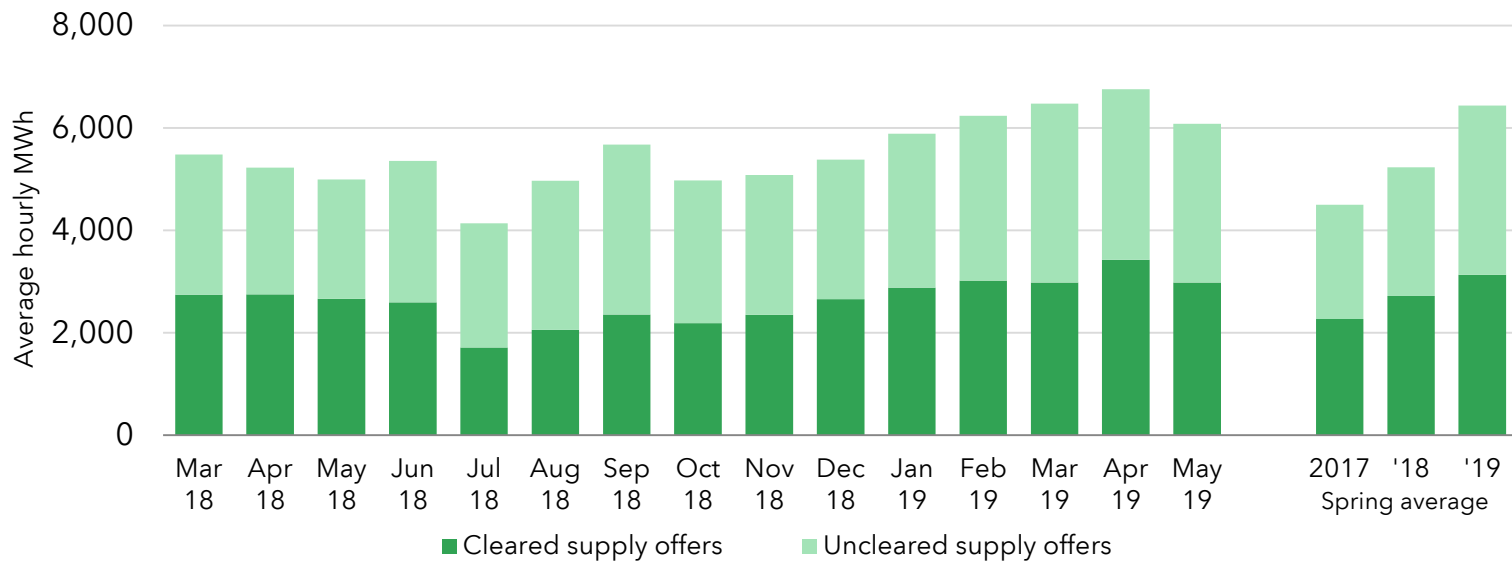
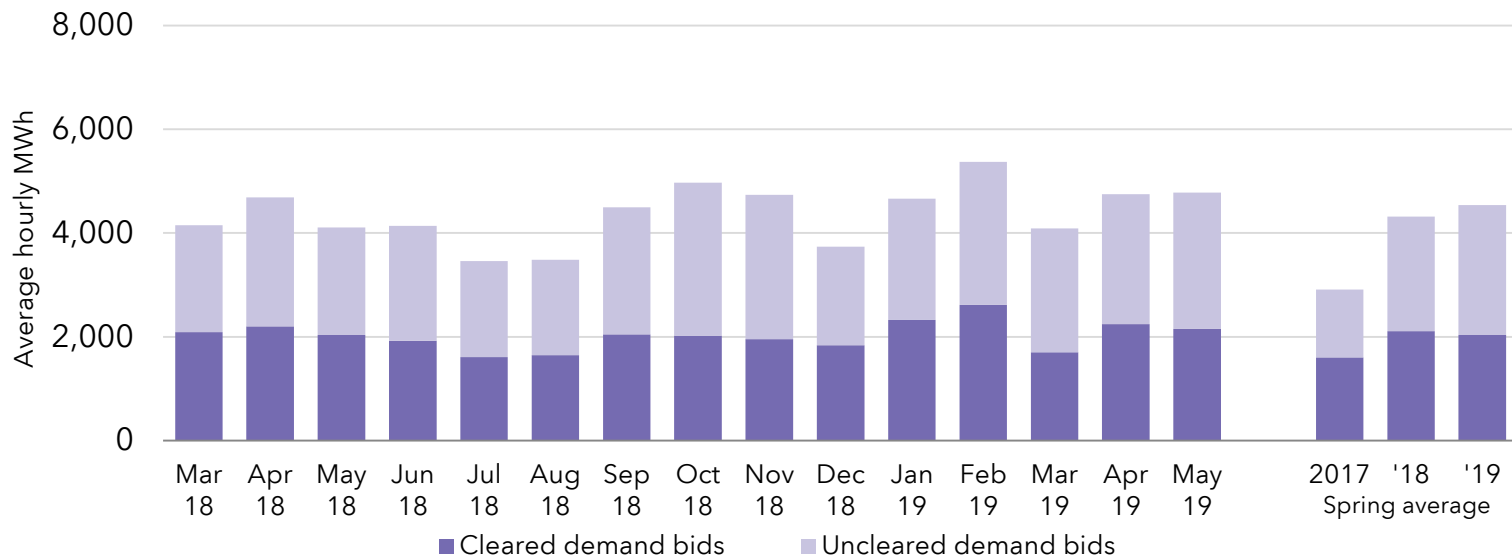


# Congestion has shifted

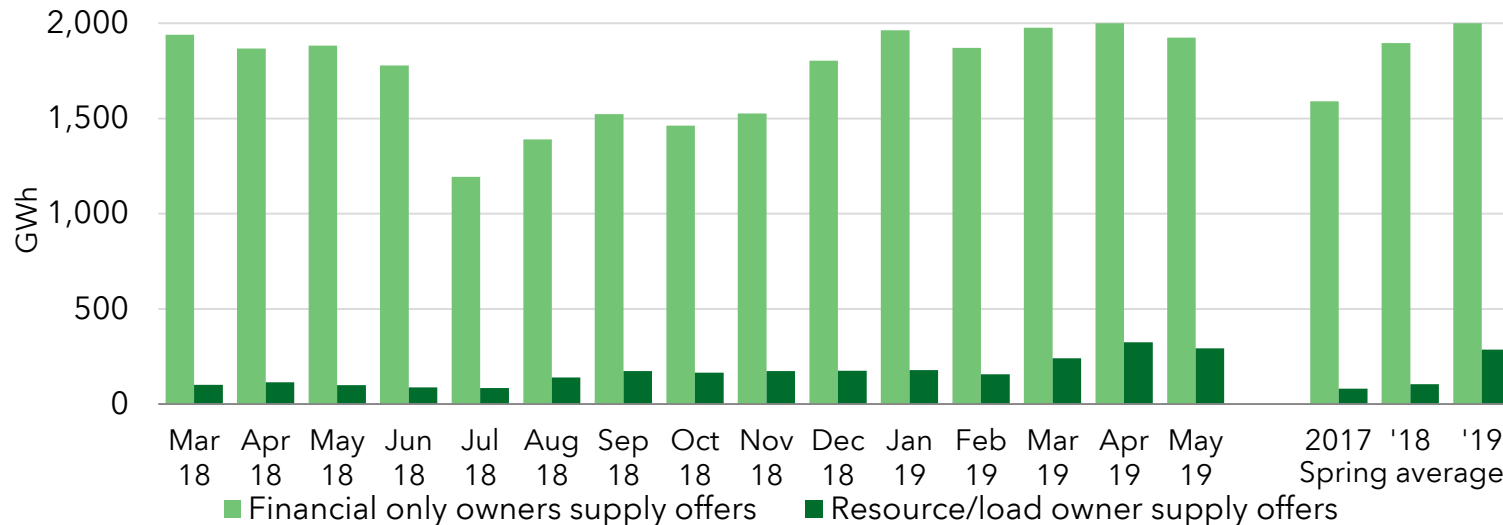
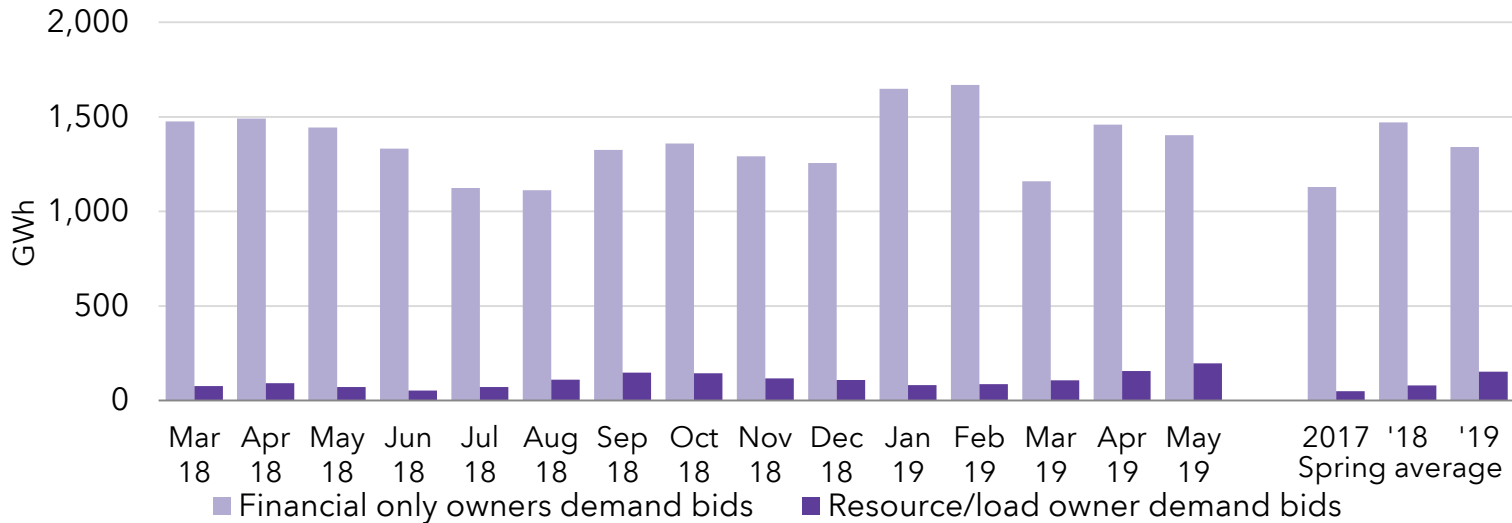




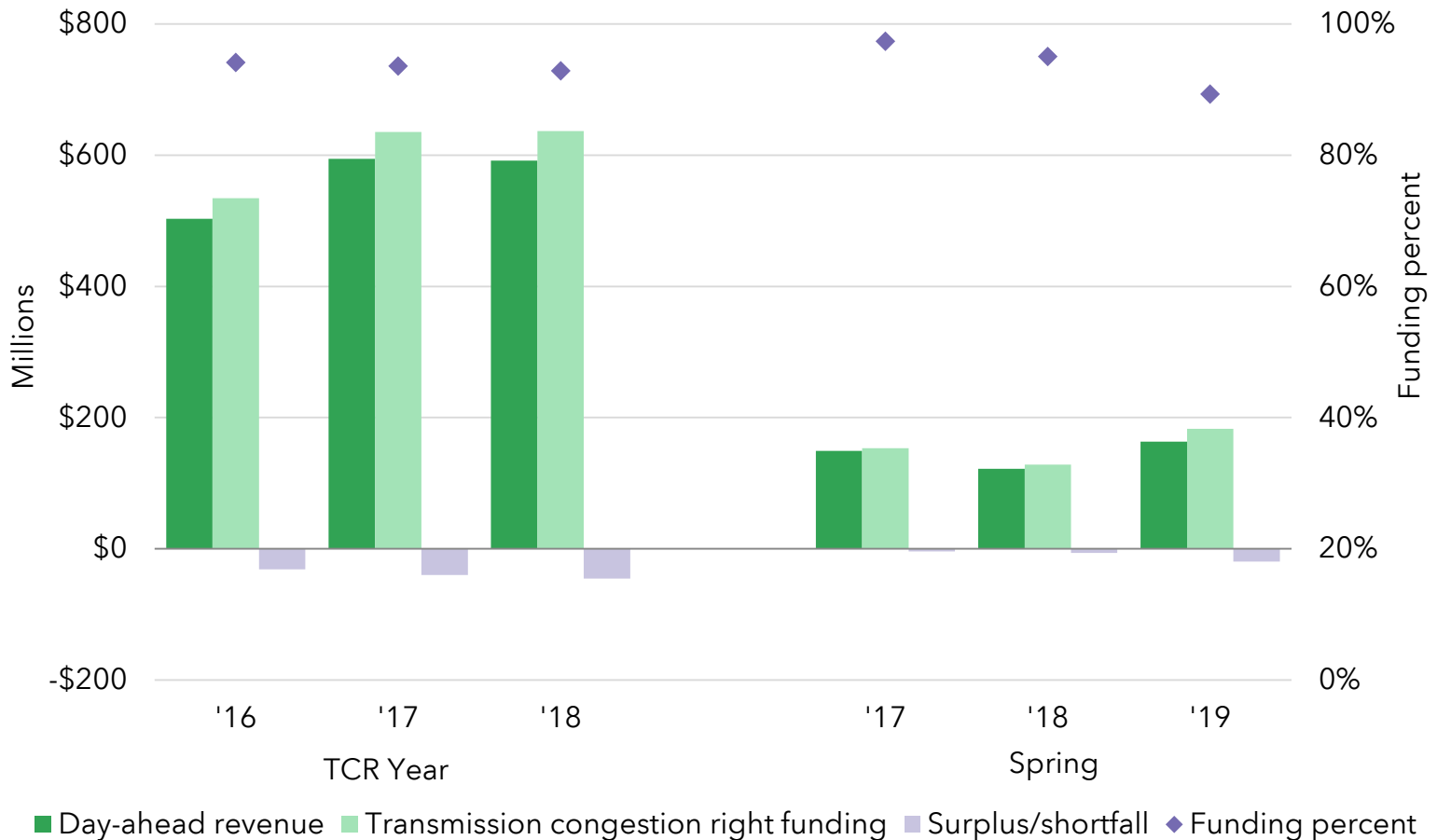
# Virtual transactions continued to grow



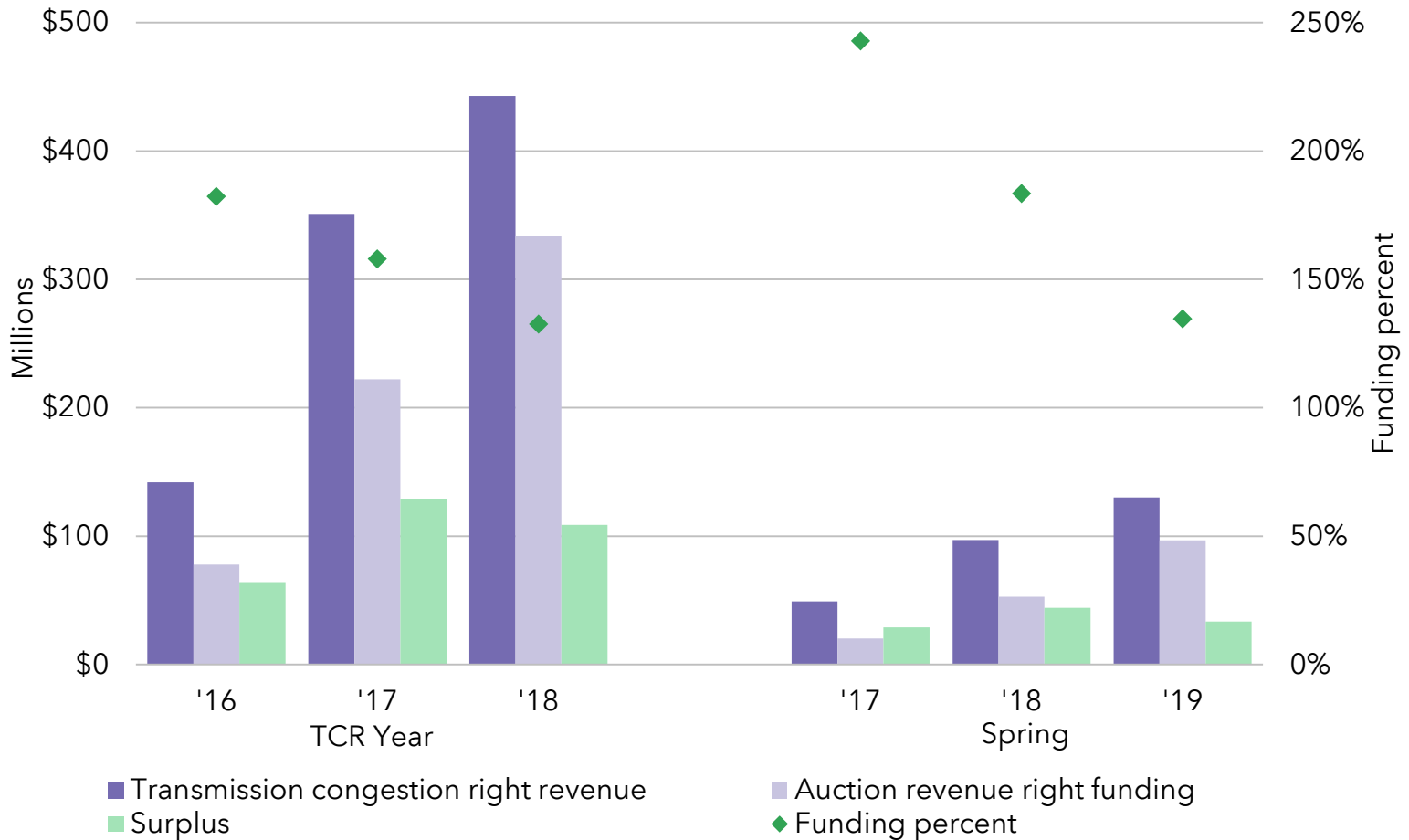
# Most virtual transactions done by financial only participants



# TCR funding

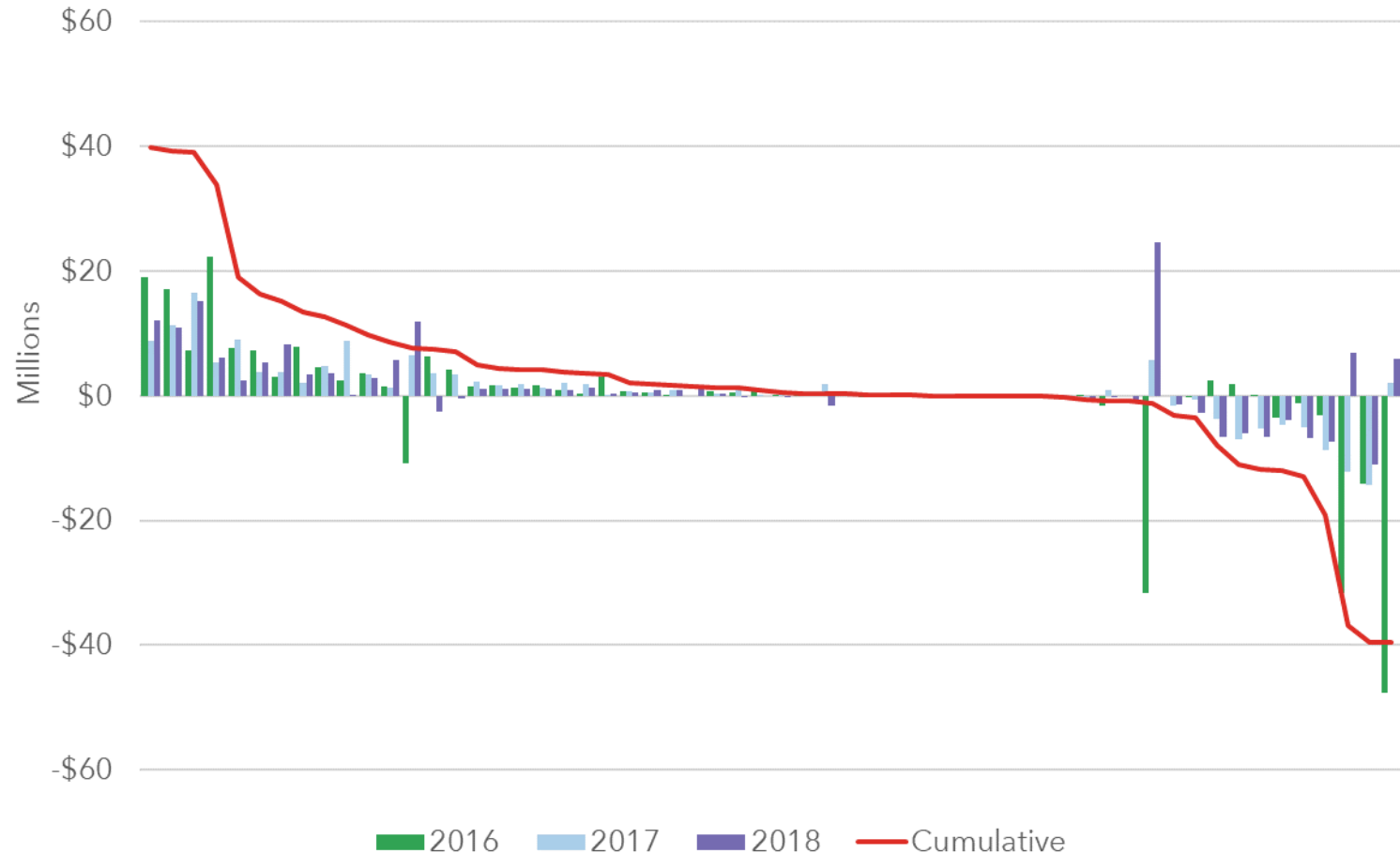


# ARR funding

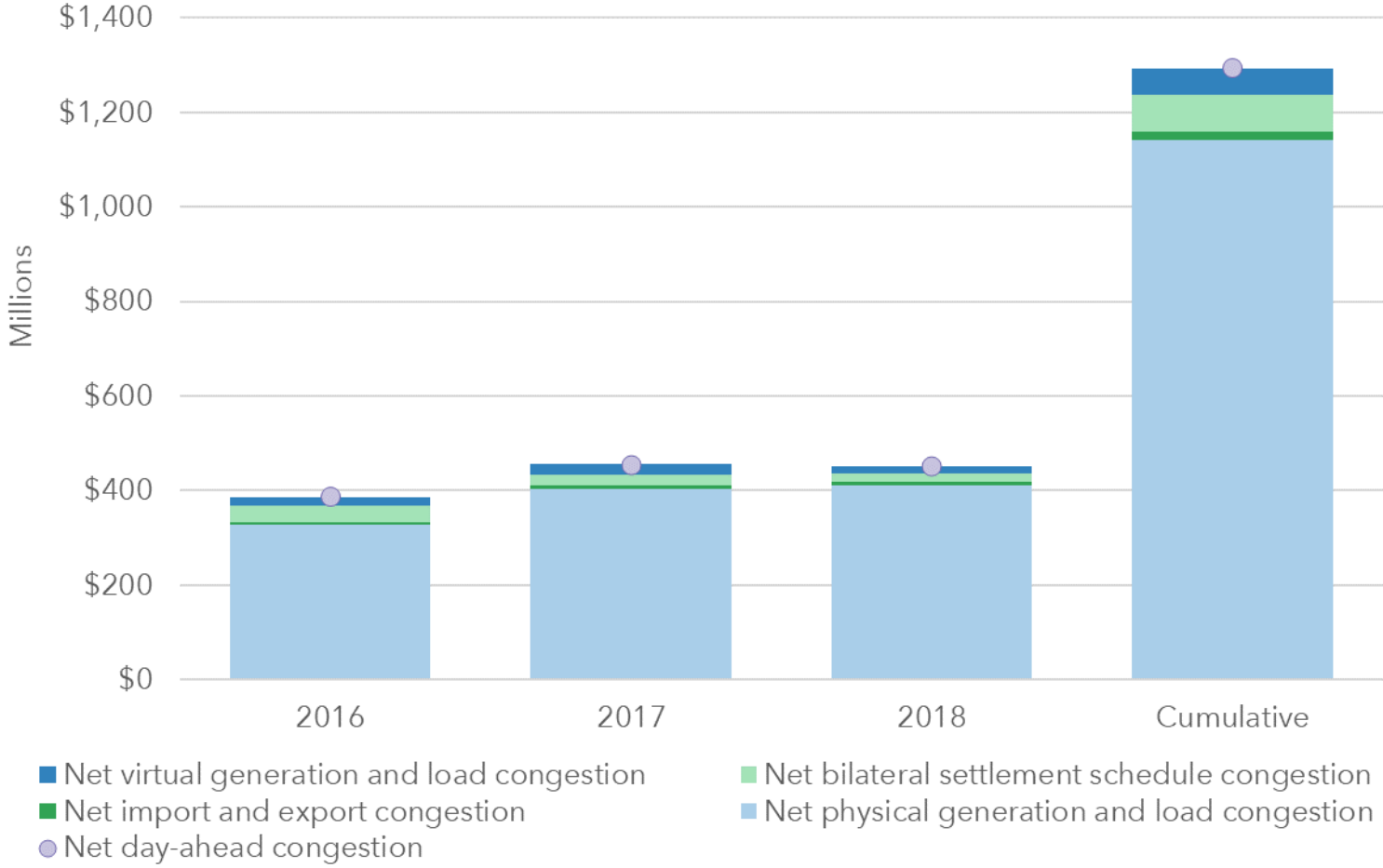


# Variability in congestion hedging profits and losses

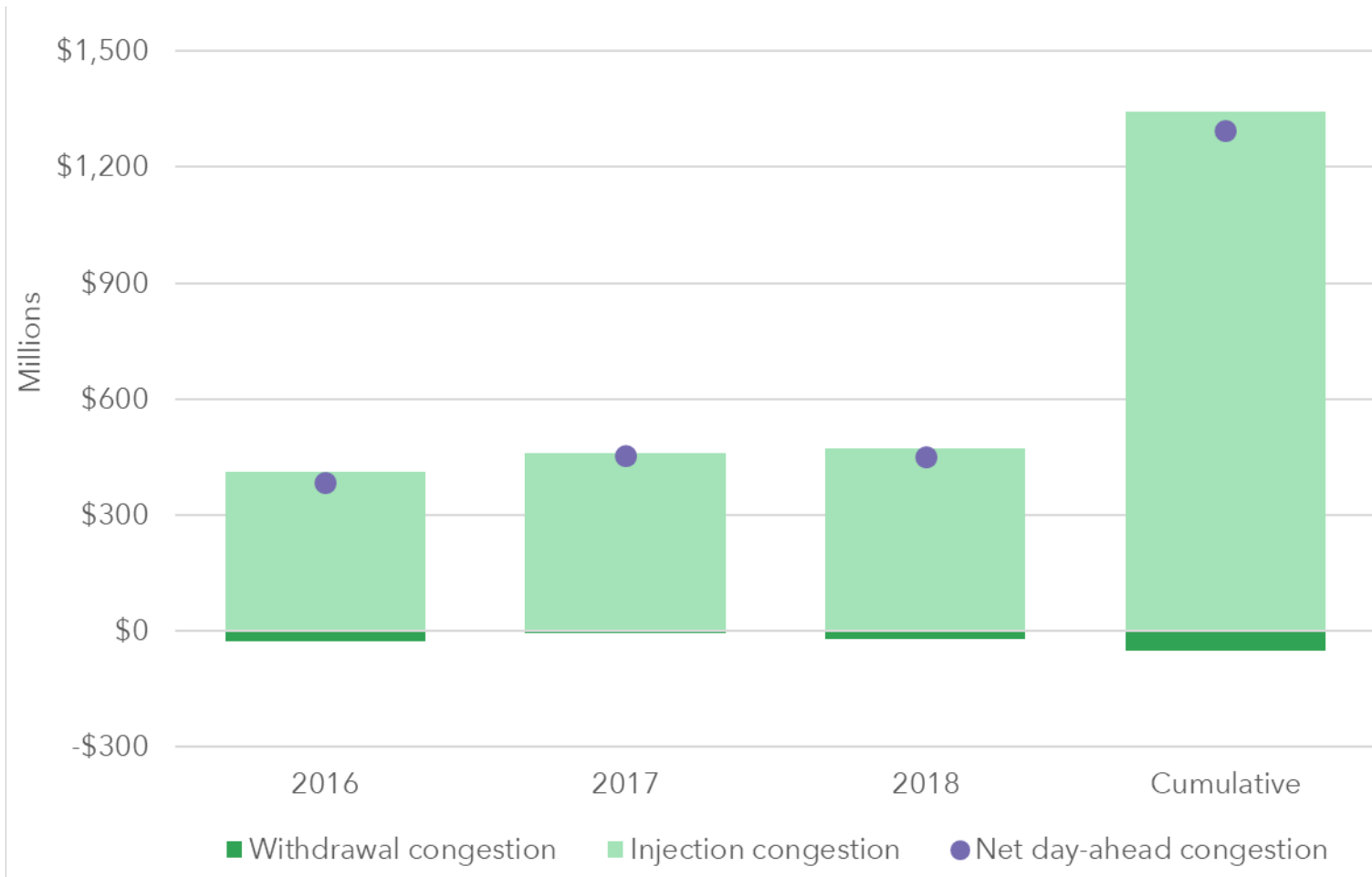
# Profitability varies substantially



# Sources of congestion

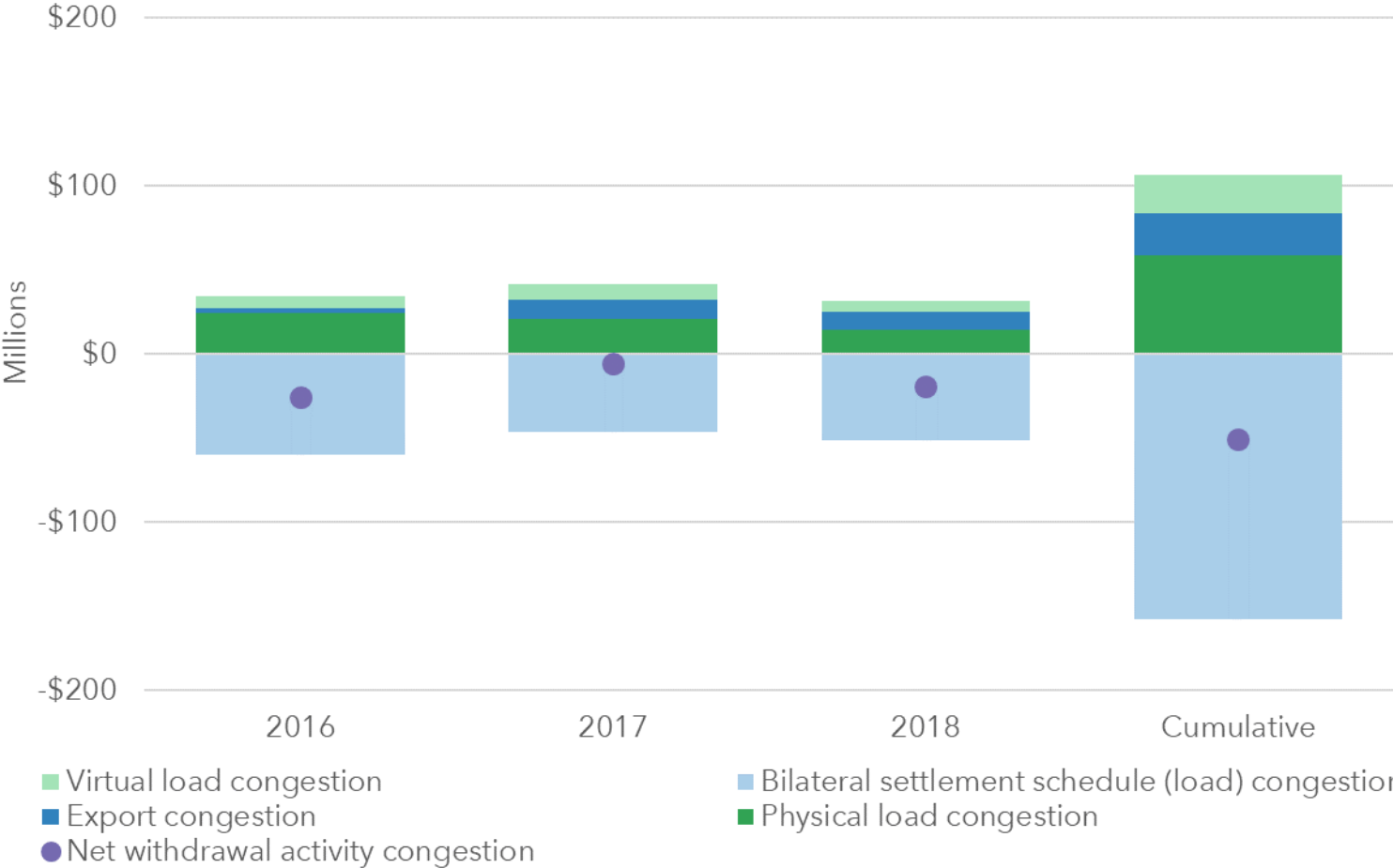


# Injection congestion is largest portion of congestion

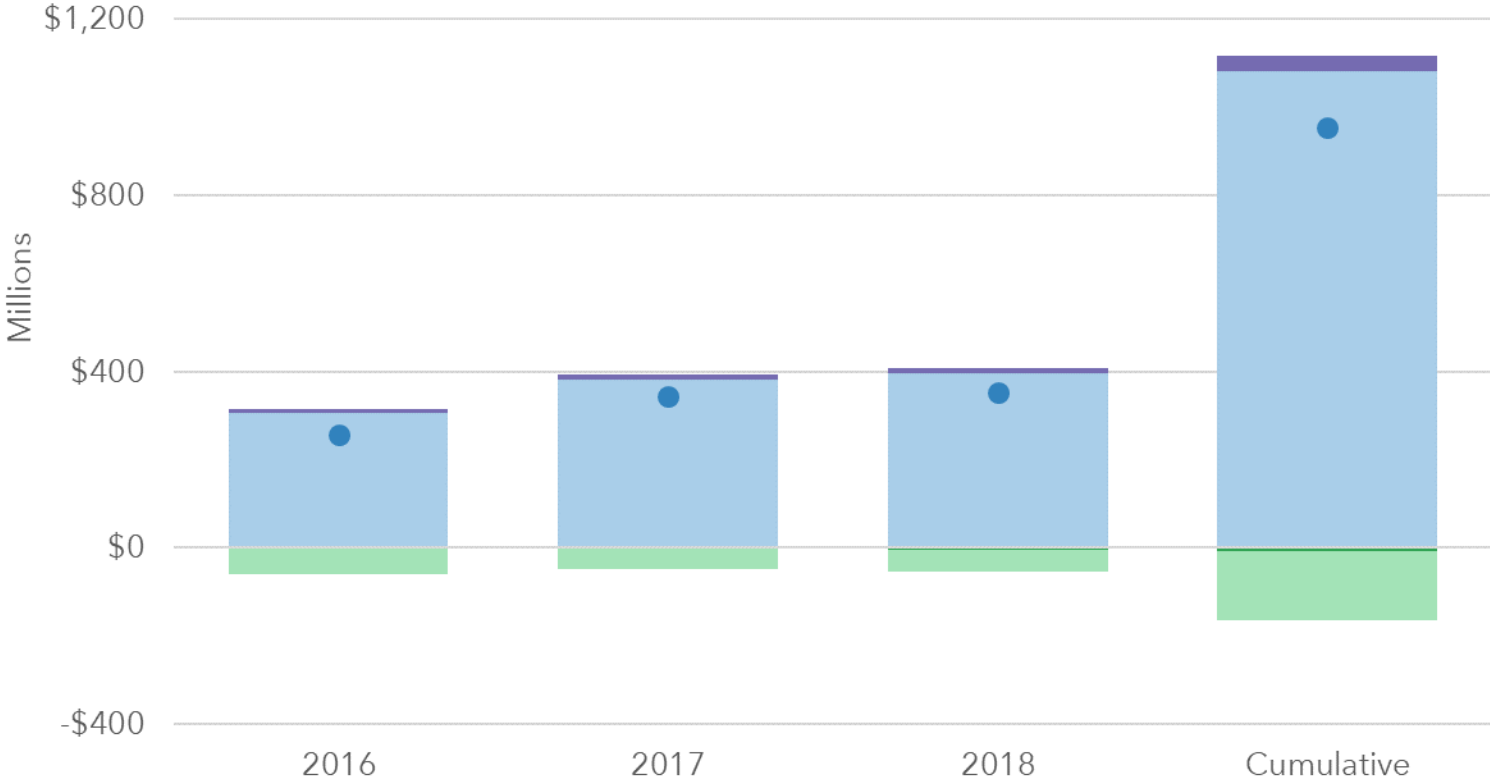




# Sources of withdrawal congestion

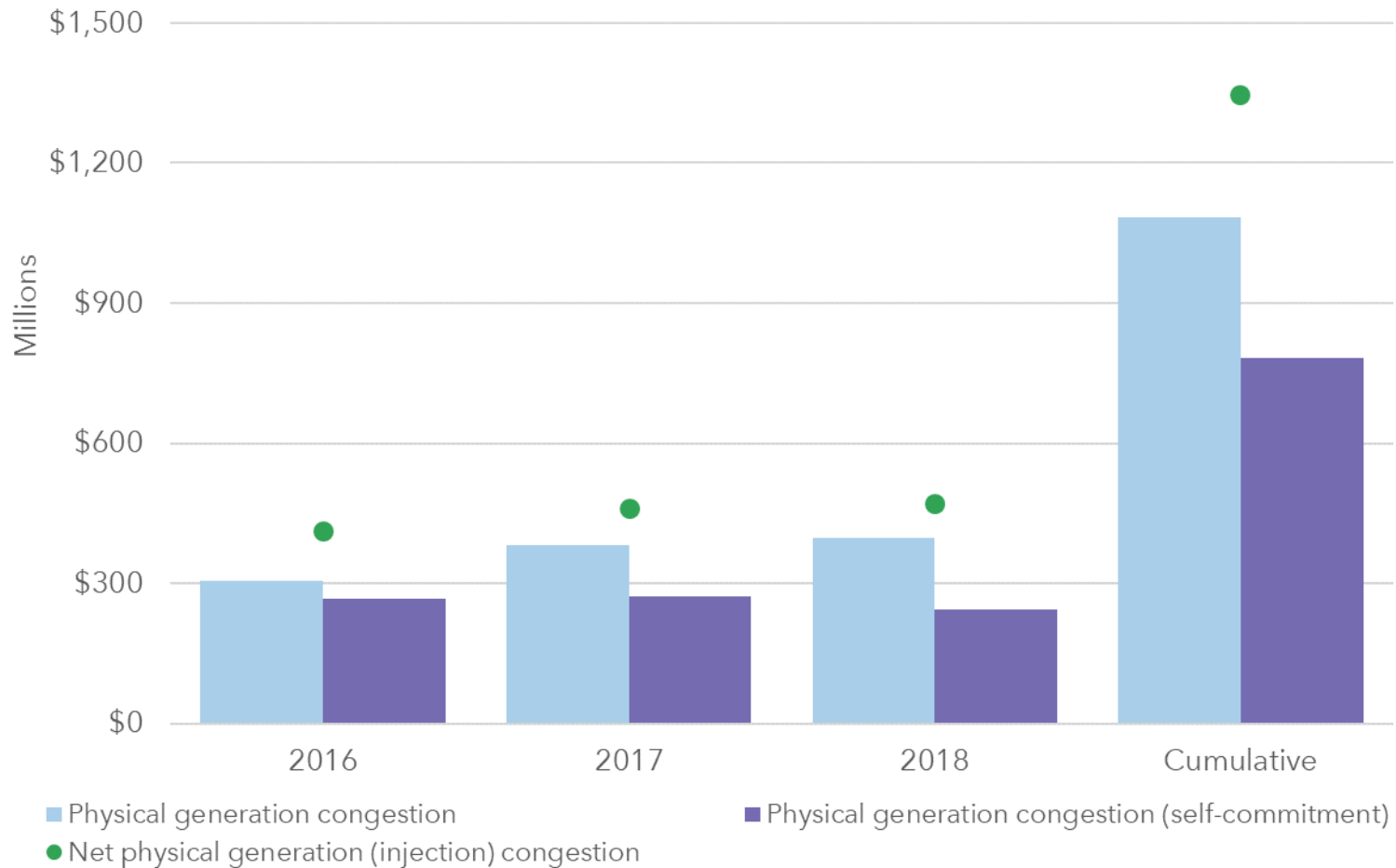


# Sources of injection congestion

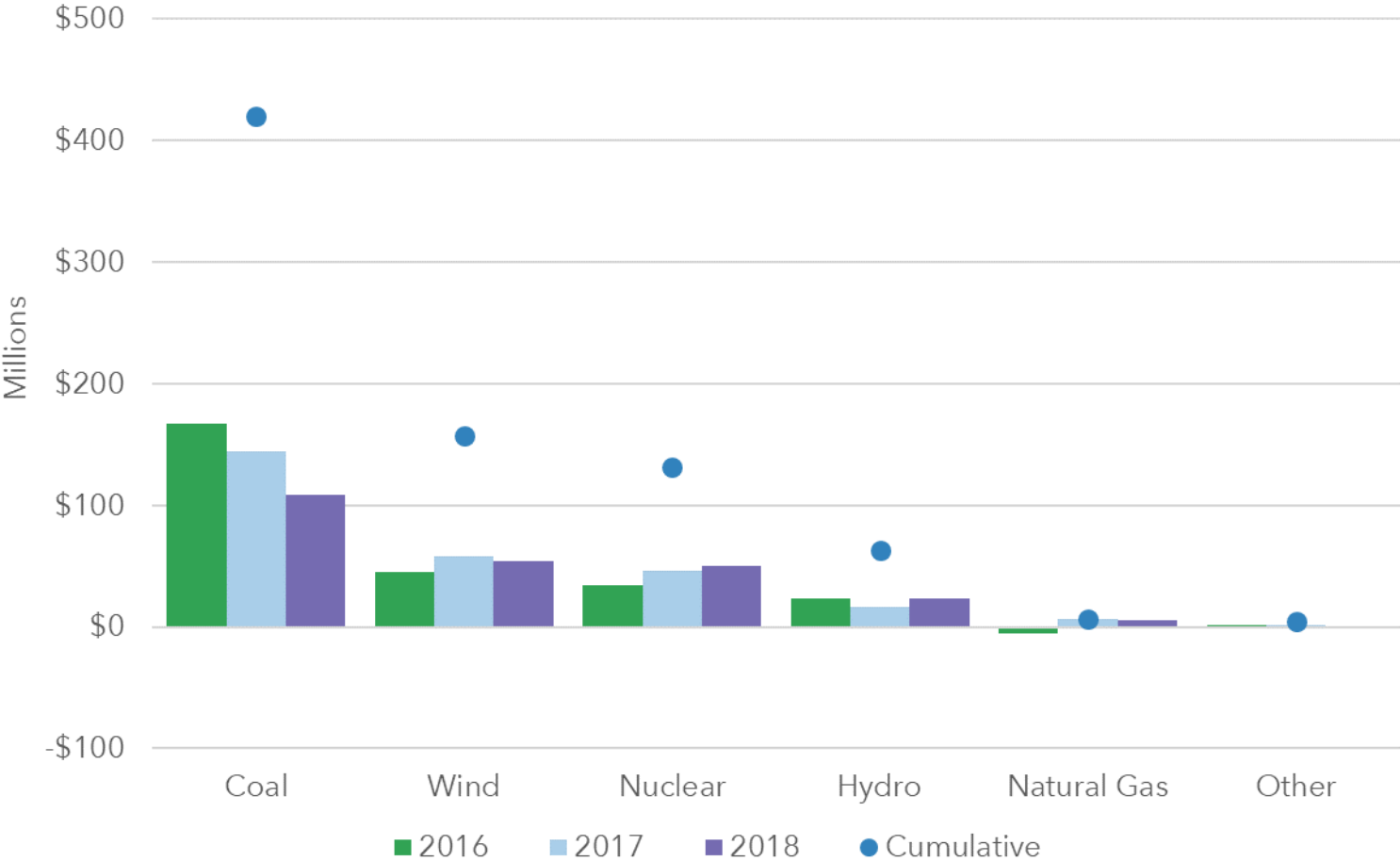


- Virtual generation congestion
- Bilateral settlement schedule (generation) congestion
- Import congestion
- Physical generation congestion
- Net injection activity congestion

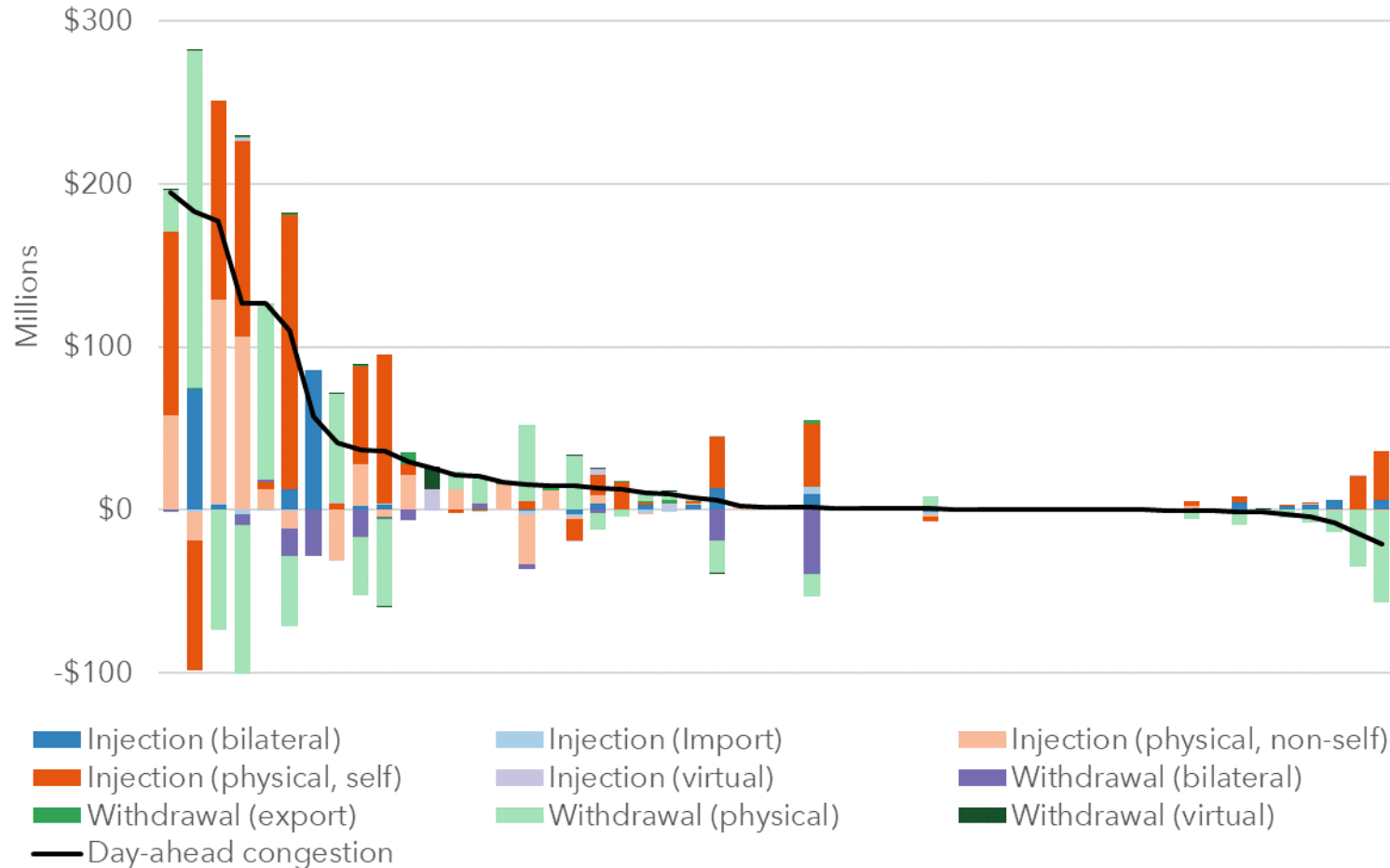
# Generation congestion



# Generation congestion of self-commits by fuel type



# Congestion by market action



# Special issues summary

- Congestion hedging profitability has been influenced more by congestion than by congestion hedging revenues;
- The congestion associated with injection activities materially exceeded the congestion associated with withdrawal activities;
- The largest portion of the congestion cost borne by market participants sources from the self-commitment of generation; and
- Significant portions of the congestion cost source from bilateral settlement schedules, which may be subject to outside of the market compensation.

# Questions?