Proposed Changes to the ICAP Demand Curve Collar

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ATLANTIC
ECONOMICS

Agenda

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The Rationale for the Collar

Historical ICAP Demand Curve Resets

- Before the last demand curve reset, the ISO would file ICAP demand curves every three years that would apply to each year in the demand curve cycle.
  - For example, in late 2013, the ISO filed demand curves that would apply to the 2014-15, 2015-16 and 2016-17 capability years.
  - Consequently, changes during the demand curve cycle in the cost of developing resources could not be reflected in the demand curves until the next cycle.

Annual Updates

- In 2016, the ISO considered revisions to this procedure. Under the proposed approach:
  - The ISO would file demand curves that would apply only to the first year in each demand curve cycle.
  - The ISO would conduct an annual update process to determine the demand curves for the remaining years in each cycle.
- Annual updates would permit the demand curves to reflect some (but not all) changes in cost of developing resources during each cycle.
  - But the updates would also add volatility, as the demand curves could move up or down during the cycle.

The Collar

- To address this volatility, stakeholders proposed a collar to smooth the impact of any abrupt shifts in the monthly reference point ("MRP").
  - The MRP is the price on the ICAP demand curve that corresponds to the minimum ICAP requirement.
- The collar would limit the amount by which the MRP can increase or decrease each year.
  - Long-term changes in the cost of developing capacity would still be recognized fully in the demand curves, over time.

Annual Updates and Volatility

- Thus, an annual update, with a collar, reflects a midpoint between:
  - The previous procedure, which required the demand curves to be set in advance for the entire demand curve reset period, and
  - Permitting the demand curves to increase or decrease without limit, based on annual updates that could reflect transient changes in the estimated cost of developing capacity.

2016 Revisions to Reset Procedure

- The ISO's May 2016 filing reflected this trade-off. In it, the ISO proposed to:
  - Extend the reset period to four capability years.
  - File demand curves before each demand curve cycle that would apply only to the first capability year in that cycle.
  - Create an annual update process that would be used to determine the demand curves for last three capability years in each cycle.
  - Apply a transitional collar that limited changes to the MRP resulting from annual updates. As the ISO explained in that filing:

    "Stakeholders generally supported this mechanism as a means to reduce the potential for reference point volatility resulting from the annual update process."

Transitional Collar

- The tariff language in the May 2016 filing indicated that the collar would apply only to the annual updates in the 2017-21 demand curve cycle (which was the first cycle to include the annual updates).

  > "[F]or purposes of the annual updates for the 2018/2019, 2019/2020 and 2020/2021 Capability Years, the reference point for each ICAP Demand Curve shall not be permitted to increase by an amount greater than twelve percent (12%) or decrease by an amount greater than eight percent (8%) from one Capability Year to the next…. [This] limitation … shall not be applied to the reference point values for any ICAP Demand Curve after the 2020/2021 Capability Year." Services Tariff, § 5.14.1.2.2.3.

- FERC accepted this proposal in July 2016. Regarding the collar, FERC stated:

  > "[W]e find the transitional [price collar] mechanism to be just and reasonable for the application of the next [demand curve reset]. The transitional mechanism provides an acceptable mitigation to stakeholder concerns regarding the potential for price volatility." *N.Y. Indep. Sys. Op.*, 156 FERC ¶ 61,039 (2016) at P 28.

- FERC did not indicate whether it would have approved the collar if it had not been limited to the first demand curve cycle.

Proposed Changes to the Collar

Proposal Would Only Affect Annual Updates

- The TOs' first proposal is to change the tariff to make the collar permanent.
  - It would apply to the demand curves that are produced by the annual updates in each demand curve cycle.
  - It would not apply to the first capability year within each demand curve cycle.
    - For example, it would not prevent the demand curves for 2021-22 from fully reflecting the impact of any factors that may have significantly increased or decreased the net cost of adding capacity since the last reset.

Impact of Collar on Volatility

- The TOs are proposing to make the collar permanent because the same concerns that motivated the proposal to apply a collar to the current demand curve cycle will continue to apply.
  - The annual update still adds volatility to the capacity market.
  - The collar limits the impact of this volatility on the amounts that suppliers receive, and loads pay, for capacity.
- The combination of annual updates and a collar also permits demand curves to change during the course of each demand curve cycle, which:
  - Permits changes in the cost of developing capacity to be recognized within each cycle.
  - Reduces the amount by which demand curves may need to shift when a new demand curve cycle begins.

Impact of Collar on Entrants

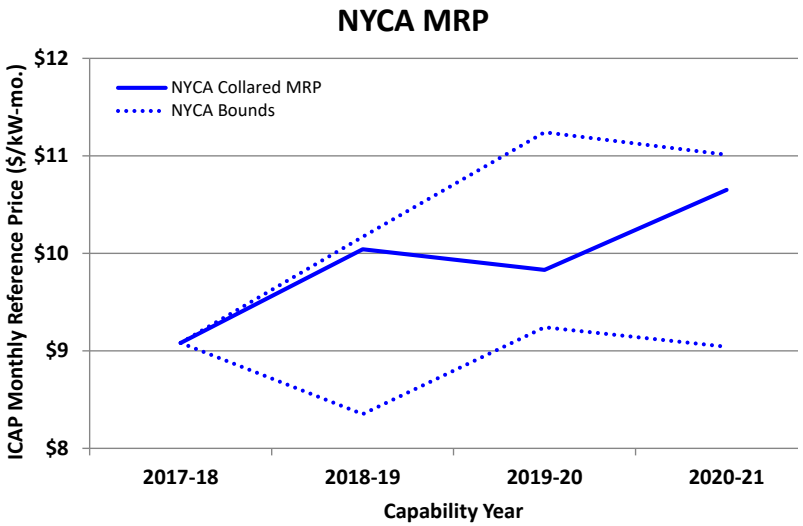
- Keeping a collar in effect also reduces uncertainty for developers of new resources.
  - Such resources may receive Part B exemptions from buyer-side mitigation if the forecasted capacity price they will receive is greater than their unit-specific net CONE.
  - But volatility in the demand curves may make it difficult for them to forecast the capacity revenues they would be projected to receive.
  - This may be significant, given the number of new resources that will be developed over the next few years.

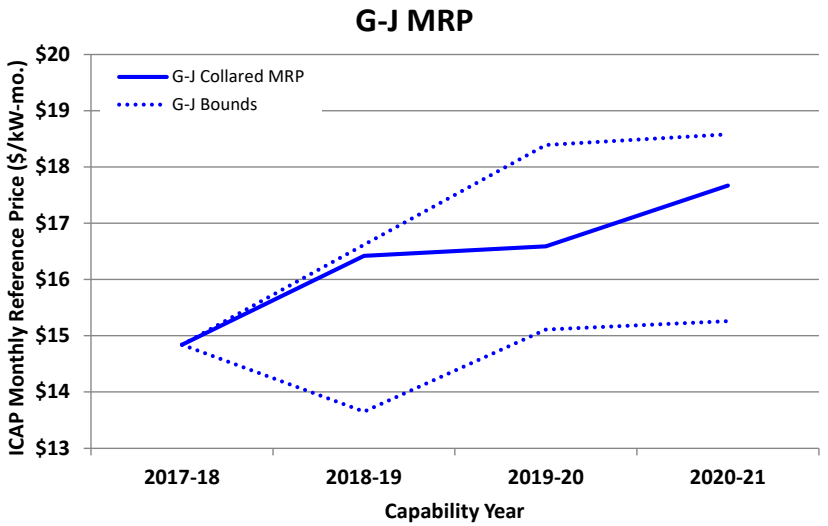
Parameters of Current Collar

- The TOs' second proposal is to modify the collar to address some concerns with the current collar.
- To understand the basis for the proposed changes, review the experience with the current collar.
- Under the collar that applies to the 2017-21 demand curve cycle:
  - Annual increases in the MRP cannot exceed 12%.
  - Annual decreases in the MRP cannot exceed 8%.
  - This limits the annual increase or decrease in the inflation-adjusted MRP to no more than 10% per year (if the annual inflation rate is 2%).

Impact of Current Collar on NYCA and G-J Demand Curves

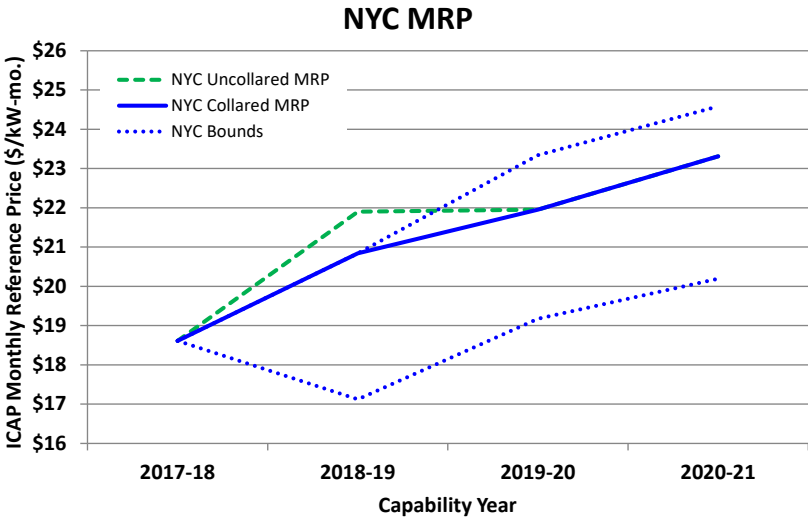
- The current collar did not affect the NYCA and G-J demand curves produced by the annual updates.
  - The dotted blue lines show the upper and lower bounds for the MRPs resulting from the collar, while the solid blue line shows the actual MRP.
  - While the NYCA and G-J MRPs each increased by 11% from 2017-18 to 2018-19, that was less than the 12% increase permitted by the collar, so the collar did not affect either demand curve.
  - Changes in the NYCA and G-J MRPs for 2019-20 and 2020-21 were well within the collar.

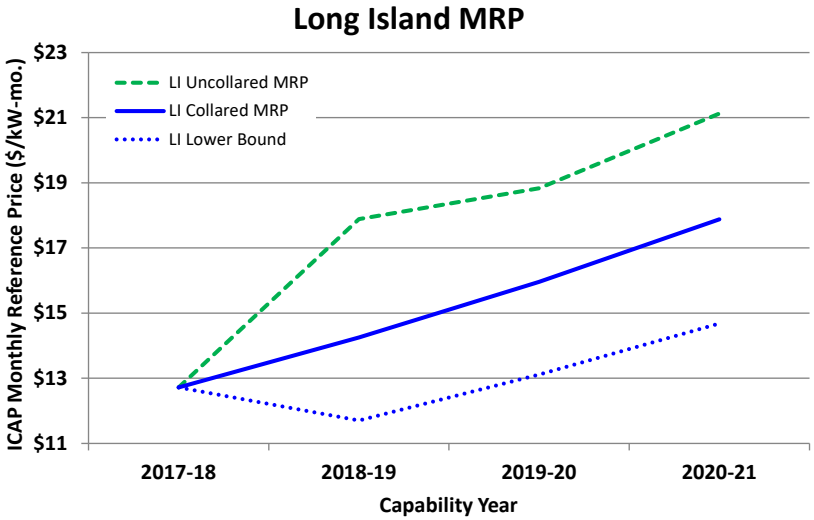




Impact of Current Collar on NYC and LI Demand Curves

- The current collar affected the NYC and Long Island demand curves produced by the annual updates.
  - The dashed green lines show the MRPs that would have been used without a collar.
  - The collar limited the 2018-19 NYC MRP, which otherwise would have increased by 18% from its 2017-18 level, to a 12% increase, but the collar did not affect the NYC MRP in 2019-20 or 2020-21.
  - The increase in the LI MRP was limited by the collar in all three years (which is why the upper bound resulting from the collar isn't visible).





Static vs. Dynamic Collars

- The current collar is static. The maximum permitted increase and decrease in the MRP are set in advance.
  - Thus, a significant and persistent change in the net cost of adding capacity may lead to a significant and persistent difference between the collared MRP and the uncollared MRP.
- To address this, the TOs propose a "dynamic collar," which could get wider over time based on market conditions.

Proposed Dynamic Collar

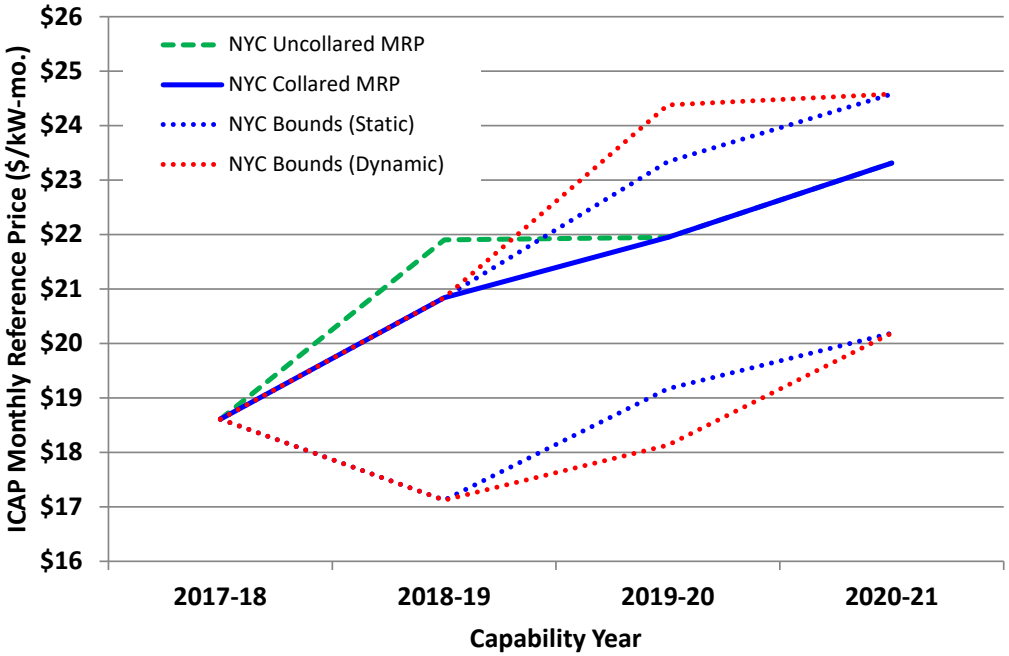
- Under the dynamic collar, if the collar limits the increase or decrease in the MRP for a year, the collar applied to the next year's MRP would widen.
  - This would permit larger increases or decreases in the MRP than were permitted in the previous year.
  - If the collar does not bind, the maximum increase or decrease in the next year's MRP would return to the original limits.
- The dynamic collar would permit significant and persistent increases or decreases in the cost of adding capacity to be recognized more quickly.
  - But it would still limit the impact of one-year spikes in net energy and ancillary services revenue or other factors that are included in the annual update.

Illustrative Dynamic Collar

- To illustrate, suppose that the following dynamic collar had been in effect for the 2017-21 demand curve cycle:
  - Initially, increases in the MRP would have been limited to 12% per year and decreases would have been limited to 8% per year. (This is the current collar.)
  - However, if the collar was binding, then for the next year, the MRP would have been permitted to increase by 17% per year or decrease by 13% per year.
  - If even that collar was binding, then for the year after that, the MRP would have been permitted to increase by 22% per year or decrease by 18% per year.

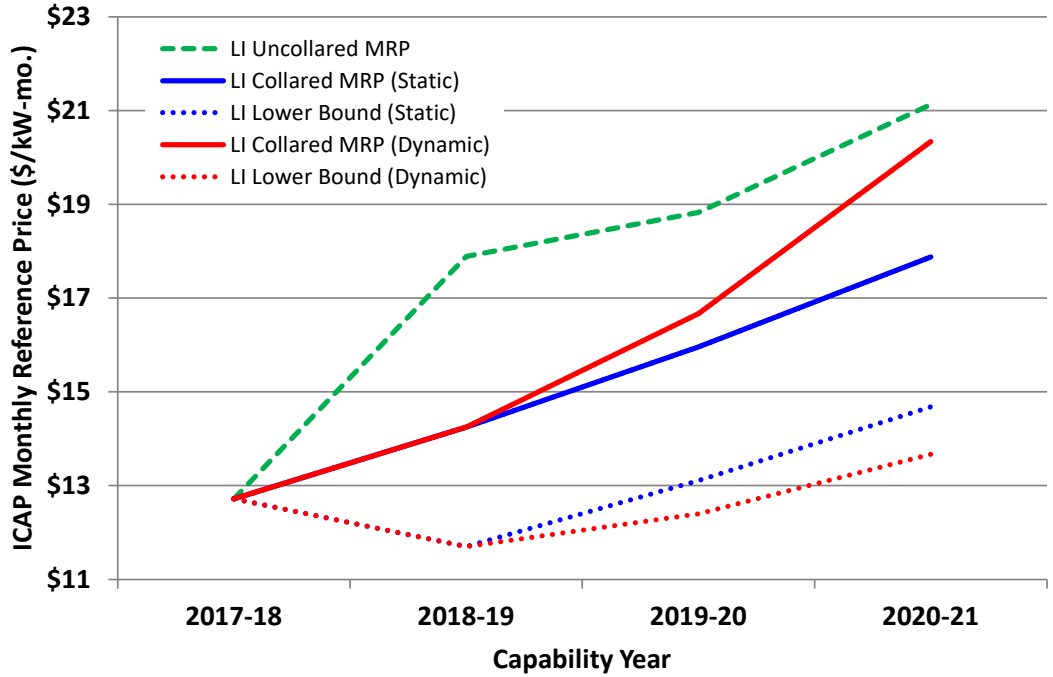
Impact of Dynamic Collar on NYC Demand Curves

- This dynamic collar wouldn't have had any effect on the NYCA or G-J demand curves, since the current (static) collar was never binding.
- It also wouldn't have affected the NYC demand curves.
  - The collar was binding for 2018-19, so the dynamic collar (shown by dotted red lines) would have been wider for 2019-20 than the static collar that was actually in effect (shown by dotted blue lines).
  - But the static collar did not limit the 2019-20 MRP, so a wider dynamic collar also would not have had any effect.



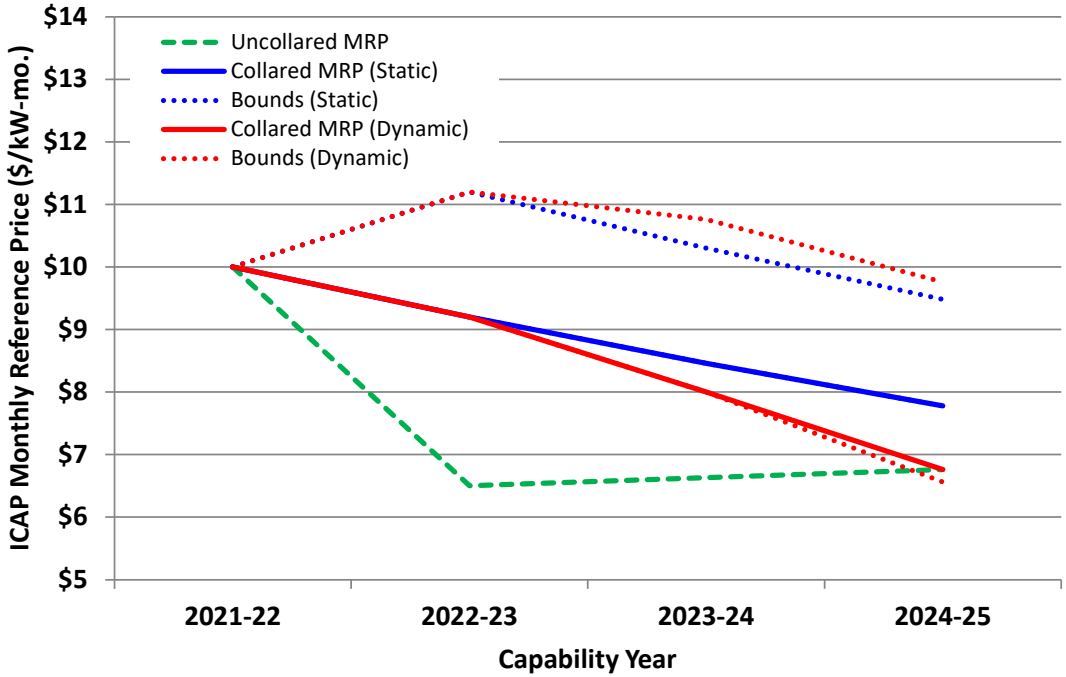
Impact of Dynamic Collar on LI Demand Curves

- But this dynamic collar would have affected the LI demand curves.
  - The collar was binding for 2018-19, so the dynamic collar for 2019-20 would have been wider than the current static collar.
  - This would have permitted a larger increase in the MRP in 2019-20 (compare the solid red and blue lines), and an even larger increase in the MRP for 2020-21.
  - Thus, the use of this dynamic collar would have eliminated almost all of the gap between the collared Long Island MRP, and the Long Island MRP that would have applied without a collar.



Dynamic Collar When the Cost of Capacity Falls

- The collar also limits reductions in the MRP resulting from annual updates.
- The dynamic collar would permit significant, permanent decreases in the net cost of adding capacity to be reflected in the demand curves more quickly.
  - In the graph below, the MRP is set at $10/kW-mo. for 2021-22. The uncollared MRP falls to $6.50/kW-mo., and then increases at the 2% annual inflation rate.
  - A static collar (in blue) limiting decreases in the MRP to 8% per year would only permit the MRP to reach $7.78/kW-mo. by 2024-25, the last year of the cycle.
  - This dynamic collar (in red) permits the collared MRP to reach the uncollared MRP ($6.76/kW-mo.) by 2024-25.



Conclusion

Concerns Motivating Collar Remain

- The concerns that initially motivated the proposal for the collar remain.
  - Transient spikes in demand curves will add volatility without reflect actual changes in the cost of adding capacity.
  - Thus, they will often fail to provide actionable price signals, since the demand curve will return to its previous level before developers can bring additional resources online to respond to the spike.
  - And they will increase uncertainty for developers facing potential offer floor mitigation.

Dynamic Collar Strikes a Balance

- The dynamic collar strikes a balance between recognizing long-term shifts in the cost of developing capacity and adding unnecessary volatility.
  - It would permit the impact of sustained changes in the cost of developing capacity to be recognized more quickly.
  - But it would also limit the impact of volatility that could otherwise result from transient spikes in MRPs.