

Evolving the Demand Response Auction to Transitional Capacity Auction (TCA)

Technical Panel

May 21, 2019

Agenda

- Background
- Demand Response (DR) Auction Perspective
- TCA Anticipated Changes for Phase 1 and Phase 2
- TCA Timelines
- Stakeholdering for TCA Phase 1
 - Stakeholder Sessions
 - Stakeholder Engagement Themes
- Next Steps for TCA Phase 1

BACKGROUND

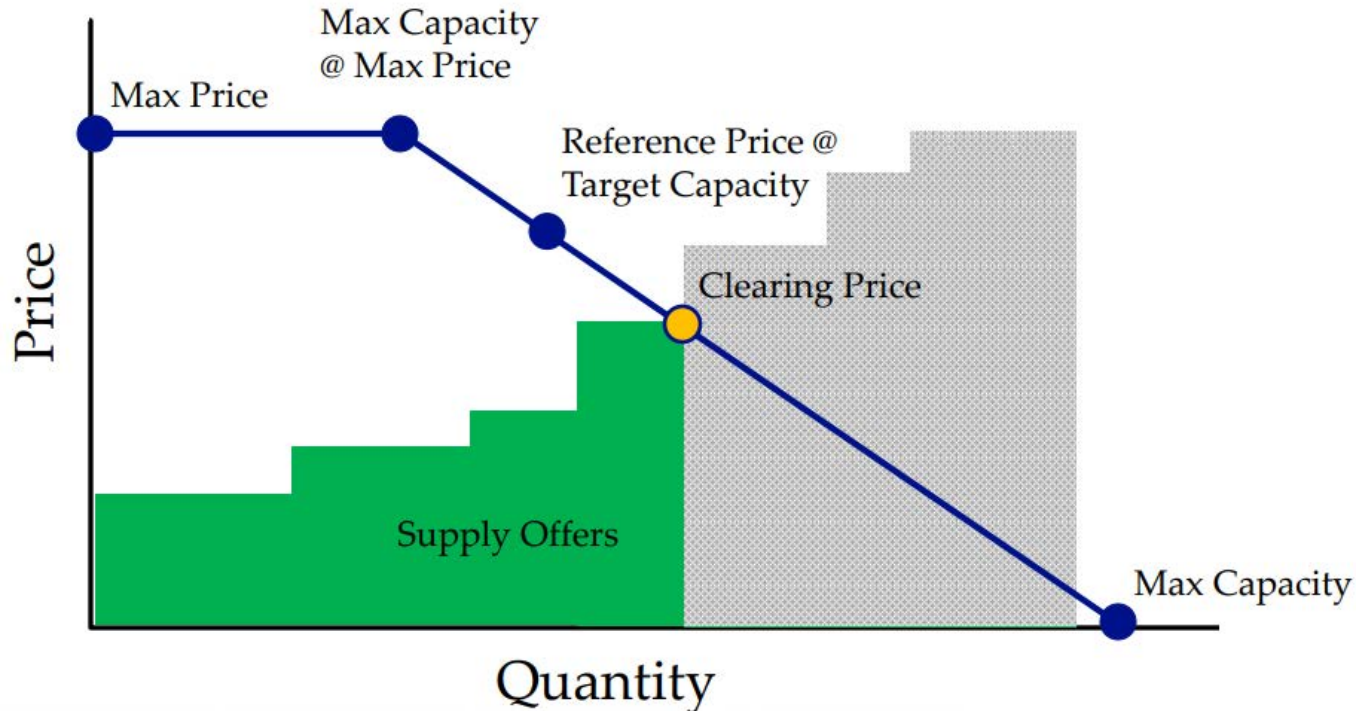
Background

- Ontario will emerge from surplus conditions next year and capacity is required to meet resource adequacy needs
- Starting summer 2020, Ontario's capacity need in the near term can be met by enhancing the existing Demand Response (DR) auction
- In a phased approach, the IESO will enhance the existing DR auction by updating or developing features and expanding competition to other resource types – a key feature of TCA
- The evolution into a TCA is a practical approach allowing both the IESO and Market Participants to realize learnings and improve designs for the enduring Incremental Capacity Auction (ICA)
- The TCA will enable an effective transition to the first ICA in Q4-2022
- IESO is expecting that the Market Renewal Projects from the energy and capacity streams will come into service around 2022

Demand Response Auction Components



DR Auction Downward Sloping Demand Curve



- Parameter values developed through the Demand Response Working Group (DRWG) and reviewed triennially
- The total quantity cleared through a demand response auction may clear above the demand curve where doing so will maximize the overall objective function

DRA Winter Commitment Period History

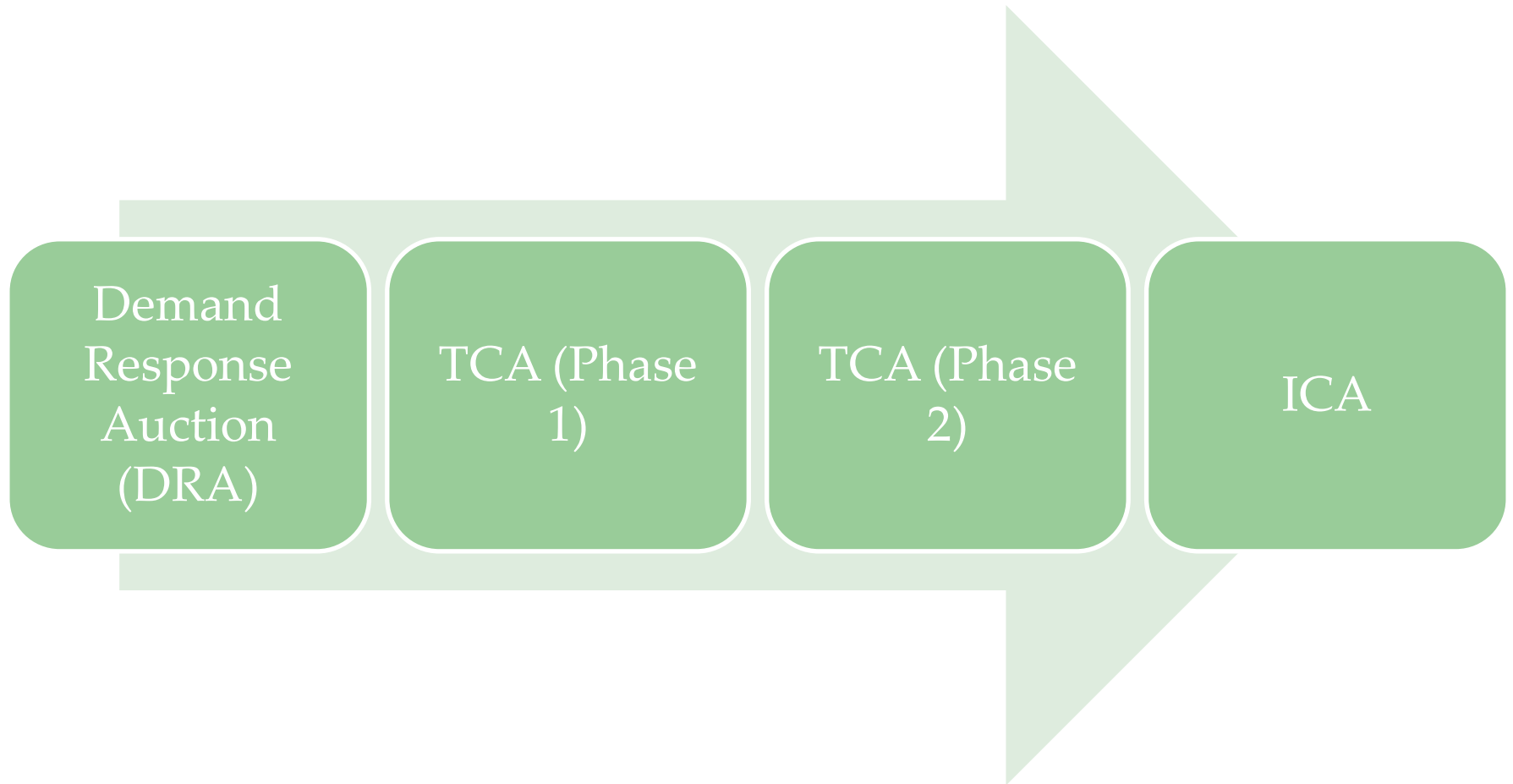
Auction Period	2016-2017	2017-2018	2018-2019	2019-2020
Target MW	367	393	606	606
Cleared MW	403.7	451.2	640.4	854.2
Ontario Clearing Price	\$359.87	\$299.48	\$317.46	\$200.00
# of Registered DRAP	17	21	35	38
# of DRAP that secured obligation capacity	7	8	13	14

*DRAP stands for Demand Response Auction Participant

DRA Summer Commitment Period History

Auction Period	2016	2017	2018	2019
Target MW	367	393	489	611
Cleared MW	391.5	448.4	550.4	772.6
Ontario Clearing Price	\$378.21	\$331.33	\$318.01	\$234.64
# of Registered DRAP	17	21	35	38
# of DRAP that secured obligation capacity	7	9	11	13

Staged Approach for Capacity



Design decisions made for each step

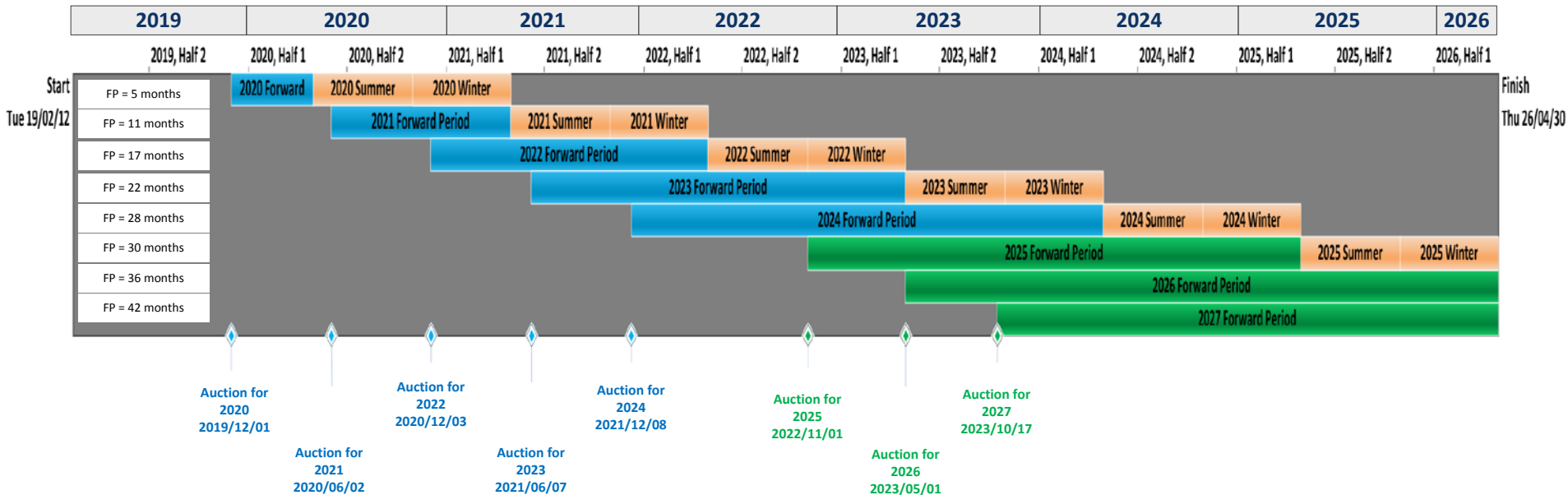
Proposed TCA Transition Timelines*

HIGH LEVEL TIMELINE: EVOLUTION OF DR AUCTION

■ = TCA Forward Period

■ = ICA Forward Period (note: ICA auction starts at Q4 2022, supporting 2025 May commitment period)

■ = Commitment Period



Assumptions:

- 1) Auctions take place approximately semi-annually until forward period = 2.5 yrs.
- 2) First ICA takes place by Q4 2022.

*The details presented are for illustrative purposes only and are subject to change

Design Elements Under Consideration

1. Registration
2. Prudentials and Deposits
3. Public Reporting
4. Qualified Capacity
5. Forward Period
6. Forward Obligations
7. Seasonal Commitments
8. Demand Curve Shape
9. Demand Curve Parameters
10. Capacity Transfers and Buyouts
11. Performance Obligations
12. Performance Assessments
13. Non-Performance Charges
14. Cost Recovery
15. Processes to Challenge the IESO
16. Force Majeure
17. Market Power Mitigation

Anticipated Changes – Phase 1

FEATURE	MARKET RULE CHANGES?	MARKET MANUAL CHANGES?
Enabling of Noncommitted, dispatchable generators to participate	Yes	Yes
Temporary change to the Load Reduction Plan	No	Yes
Submitting Non-Performance Events only upon request	No	Yes
Non-performance Factors – amending September	No	Yes
Target Capacity	No	No

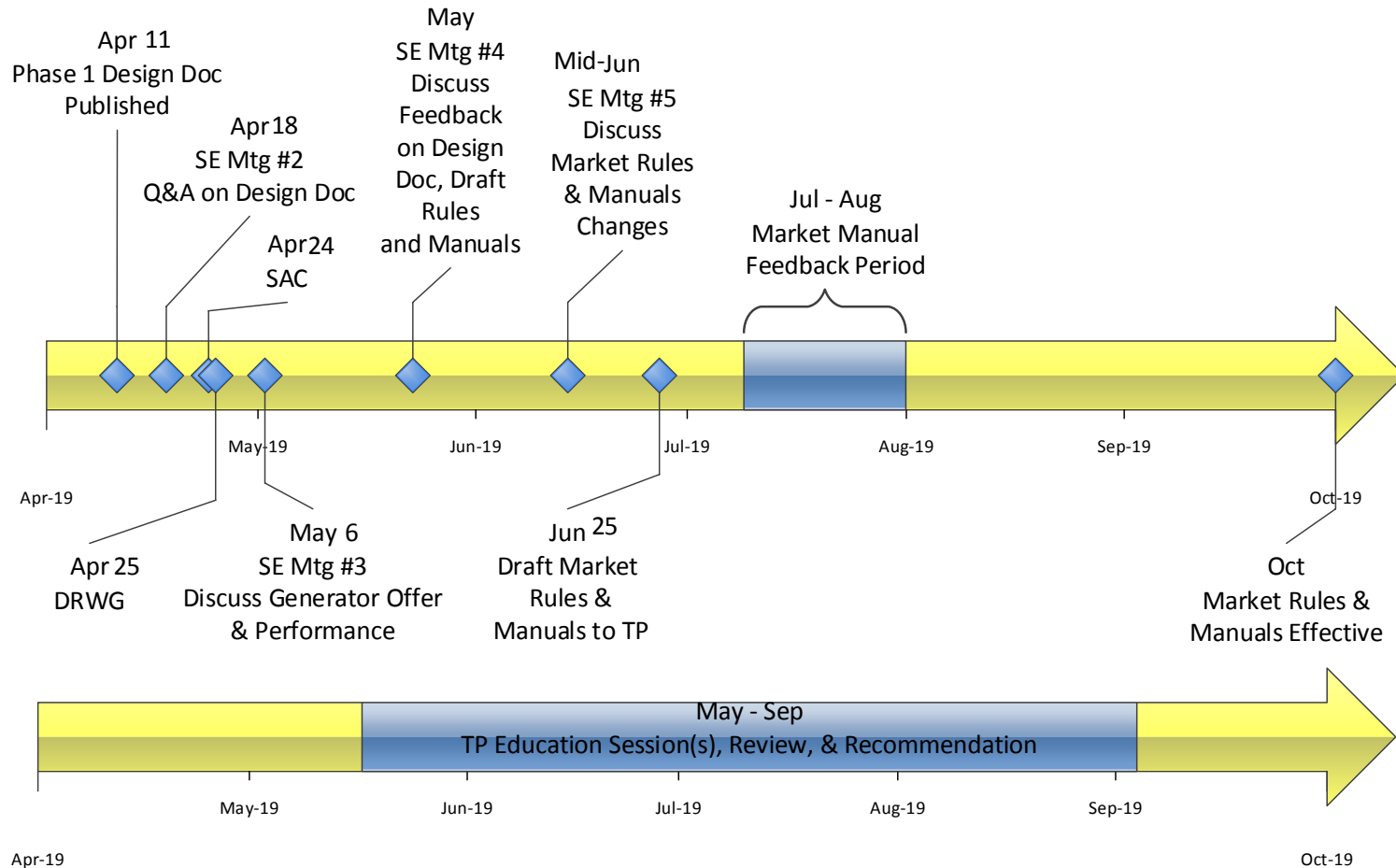
Anticipated Changes – Phase 2

FEATURE	MARKET RULE CHANGES?	MARKET MANUAL CHANGES?
Capacity Qualification	Yes	Yes
Performance Assessment (non-performance factors, performance deadbands)	Yes	Yes
Enabling other resources to participate (imports, merchant capacity, etc.)	Yes	Yes
Market Power Mitigation	Yes	Yes
Zonal Parameters	No	Yes
Buy outs	Yes	Yes

Note: Info is subject to change and Phase 2 will be covered in separate design document(s)

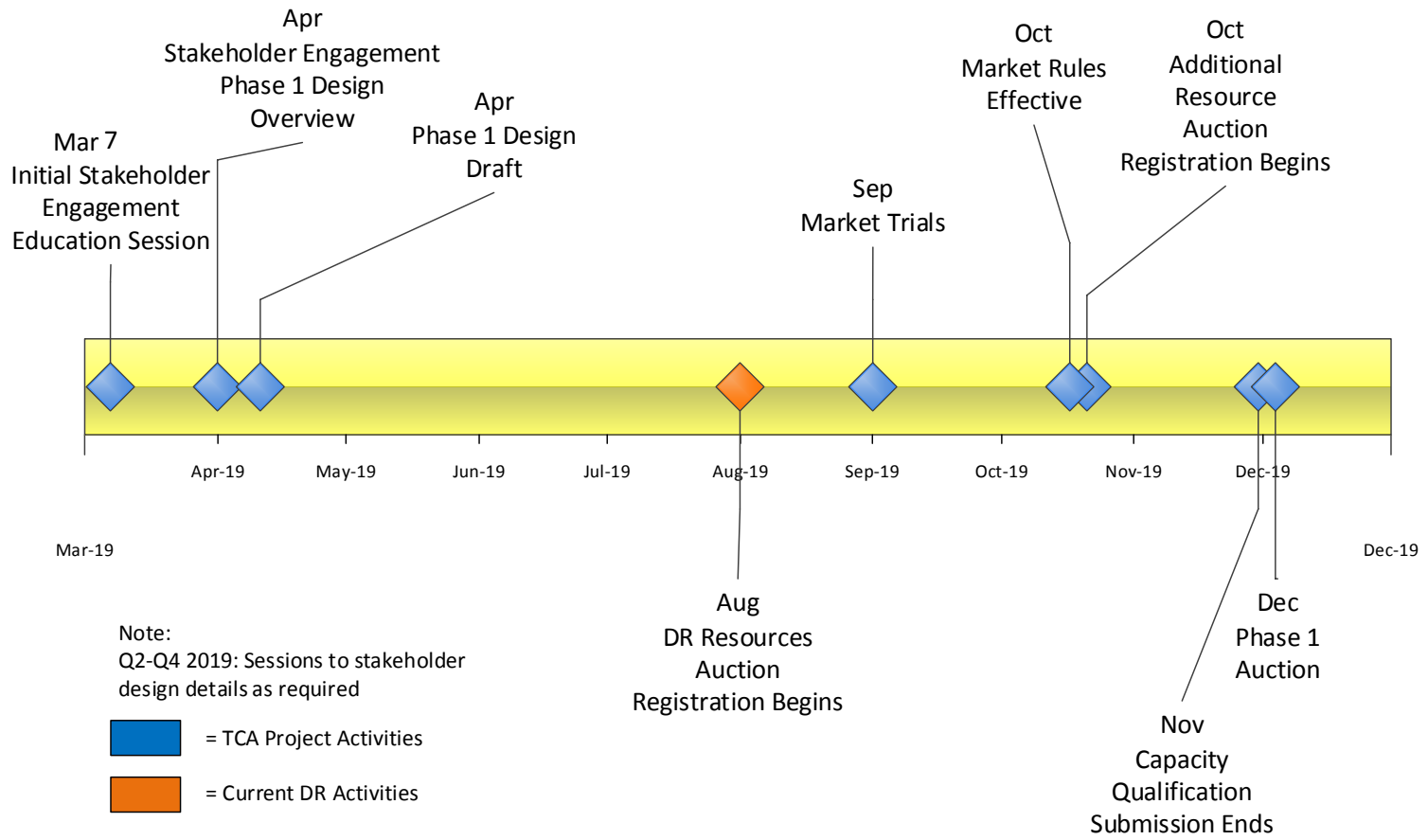
TCA TIMELINES

Timelines – Phase 1



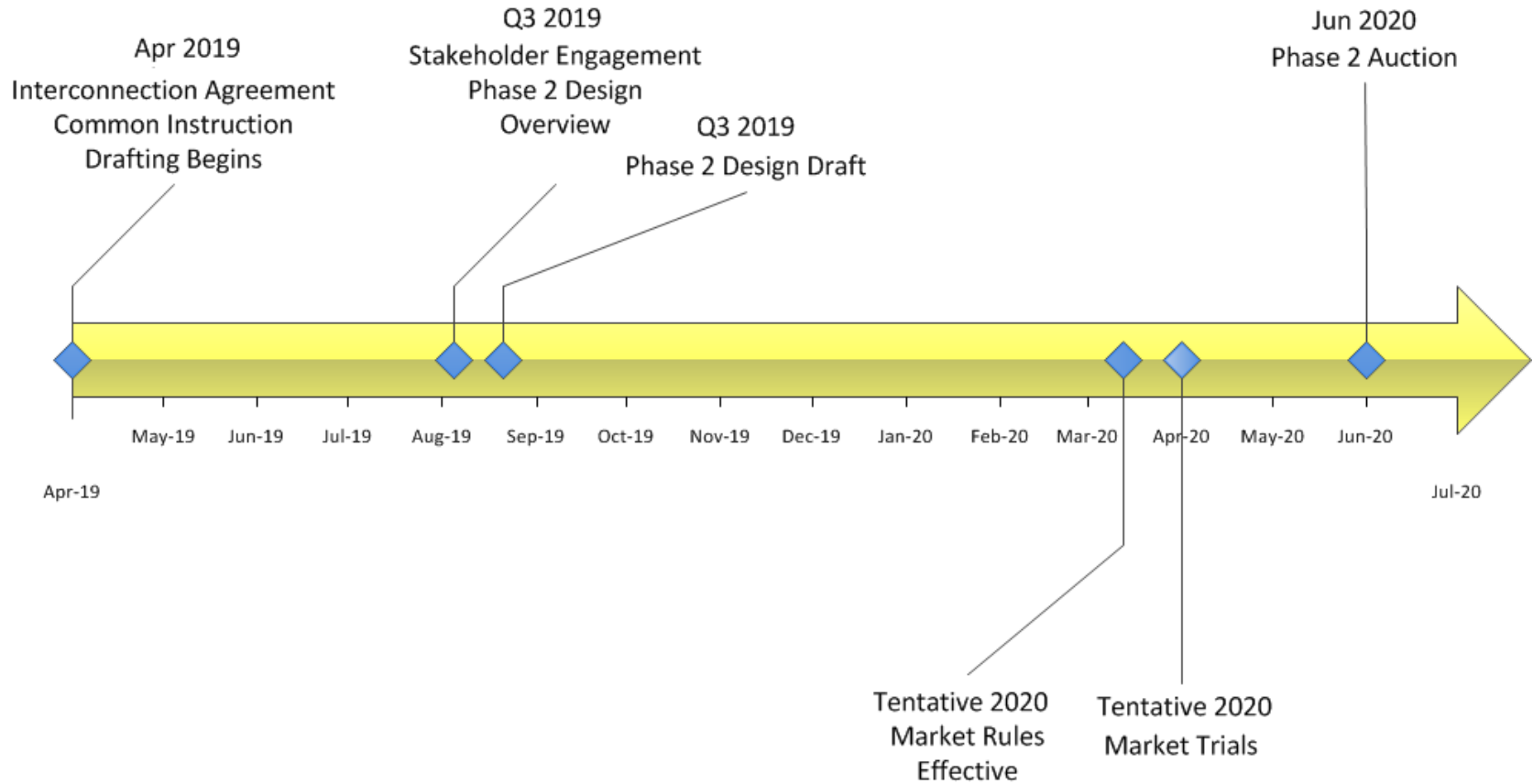
TCA Schedule – Milestones Phase 1

Transitional Capacity Auction Project Schedule – Phase 1: 2019



TCA Schedule – Milestones Phase 2

Transitional Capacity Auction Project Schedule – Phase 2: 2019 - 2020



Proposed TP Schedule for Phase 1 and 2

- Dec 2019 Auction Rule Package (Phase 1):
 - June 25: Share draft Market Rules and Manuals with TP
- Jun 2020 Auction Rule Package (Phase 2):
 - Begin TP engagement in Nov 2019 concluding in Q1 2020
- Dec 2020 Auction Rule Package (Phase 2):
 - Begin TP engagement in Q2 2020 concluding in Q3 2020

STAKEHOLDERING

Stakeholder Sessions

- March 7: Introductory discussion and presentation of the design approach
- April 18: Meeting to respond to initial questions and feedback on Phase One design
 - Provide an opportunity for stakeholders to clarify items of uncertainty; discuss initial feedback
- May 6: Generator Participation Webinar
- May 22: Meeting to discuss the next steps for Phase One design
 - Review stakeholder feedback on Phase One design
 - Review draft Market Rules and Manuals required to implement Phase One design

Stakeholder Feedback - Themes

1. Timelines

- proposed timelines may not allow for sufficient stakeholder engagement on design and supporting rule amendments

2. Future Opportunities

- need to remove barriers to competitive participation by DR resources in the Energy and Ancillary Services markets

3. Capacity

- clarify the future capacity need and associated target capacity approach

Stakeholder Feedback - Themes

4. Enabling Eligible Resources

- request to enable additional resources to participate in Phase 1

5. Considerations for Phase II

- stakeholders looking for more detail on design features and timelines

IESO Response: Timelines

- In response to stakeholder feedback, the IESO reduced the scope of Phase 1 changes to:
 - Allow sufficient time for stakeholder input
 - Allow sufficient time for stakeholder review of Market Rules and relevant market manual content prior to Technical Panel review, consistent with the recommendations adopted from the December 2018 IESO Report on Rule Governance & Decision-Making

...while still allowing the IESO to reliably meet Ontario's near-term capacity needs in a competitive, cost-effective manner and directionally consistent with the design features of the ICA

IESO Response: Future Opportunities

- The IESO recognizes there are opportunities to remove certain barriers that DR is facing in the IESO market
- The IESO supports adding new suppliers to deliver important reliability services. We have various forums where this evolution will be discussed:
 - Market Development Advisory Group (MDAG):
 - Participation in the Operating Reserve market
 - Providing Regulation services
 - Demand Response Working Group (DRWG):
 - Aggregated Load requirements
 - Utilization and/or Energy Payments
 - Injection or behind-the-meter generation recognized as DR capacity

IESO Response: TCA Target Capacity

- Goal:
 - Starting today, develop methodology to increase the likelihood of successful, reliable outcomes in the years when capacity needs increase significantly
- Prepare for the need (reliability assurance):
 - The IESO's planning capacity needs increase significantly during the TCA time-frame; the IESO must create an appropriate business environment and auction process confidence to sustain and develop resources such that sufficient capacity is available when needed in the years when the capacity requirement increases significantly (2023-2026)
 - The “reliability assurance” capacity ensures reliable future operations by building the market in advance of when larger reliability (capacity) needs arise in 2023
- Enable competition:
 - Proactively enabling additional resources in advance of significant reliability need is an appropriate way to maximize future participation when the demand for capacity increases significantly

IESO Response: TCA Target Capacity

Methodology:

1. Review the most recent published IESO Planning requirements for Ontario capacity.
2. Assess past performance (enabled resources, processes), and expected new resources acquired through the TCA.
3. Based on steps 1 and 2, consider if an increase in the target capacity, above the IESO Planning requirement, (i.e., establish a reliability assurance capacity) is needed to support future capacity for both summer and winter obligation periods.
4. Publish a pre-auction report several months in advance of the TCA that states the upcoming Target Capacity.

IESO Response: TCA Target Capacity

Proposed Winter Target Capacity *

Delivery Period (Winter)	2019/20 (DR Auction - completed)	2020/21 (TCA in December 2019)	2021/22 (TCA in June 2020)	2022/23 (TCA in December 2020)	2023/24 (TCA in June 2021)	2024/25 (TCA in December 2021)
IESO Planning Adequacy Requirement	0	0	0	1,085	2,263	4,063
TCA Reliability Assurance	-	667	867	1,464	N/A	N/A
Proposed TCA Target Capacity	606	667	867	1,464	2,263	4,063



* - Based on data from the 2018 Technical Planning Conference and subject to pre-auction review/change

IESO Response: TCA Target Capacity

Proposed Summer Target Capacity *

Delivery Period (Summer)	2019 (DR Auction - completed)	2020 (TCA in December 2019)	2021 (TCA in June 2020)	2022 (TCA in December 2020)	2023 (TCA in June 2021)	2024 (TCA in December 2021)
IESO Planning Adequacy Requirement	0	811	335	583	3,844	4,686
TCA Reliability Assurance	611	672	874	1,136	N/A	N/A
Proposed TCA Target Capacity		811	874	1,136	3,844	4,686



* - Based on data from the 2018 Technical Planning Conference and subject to pre-auction review/change

Eligible Resources

- A schedule will be firmed up in late 2019 to finalize the enabling plan for the TCA

Resource Type	Anticipated Participation Date
Demand Response	2019 (Phase 1)
Existing uncommitted dispatchable generators	2019 (Phase 1)
System-backed imports	Jun 2020
Resource-backed imports	Dec 2020
Uprates	Dec 2020
Merchant Capacity	Dec 2020
Self-scheduling	Dec 2020
New directly-connected resources	TBD
Existing Dx-connected resources	TBD
New Dx-connected resources	TBD

What's Next for TCA Phase 1?

- Next Stakeholder Engagement session on May 22 will include draft Market Rules and Market Manuals changes for Phase 1
- Stakeholder meeting in June to **review** stakeholder feedback on draft Market Rules and Market Manuals content prior to Technical Panel review
- June 25 TP: Draft Market Rules and Market Manuals to be shared with Technical Panel

* The link to the Meeting Ontario's Capacity Needs: 2020-2024 Engagement page can be found [here](#).