



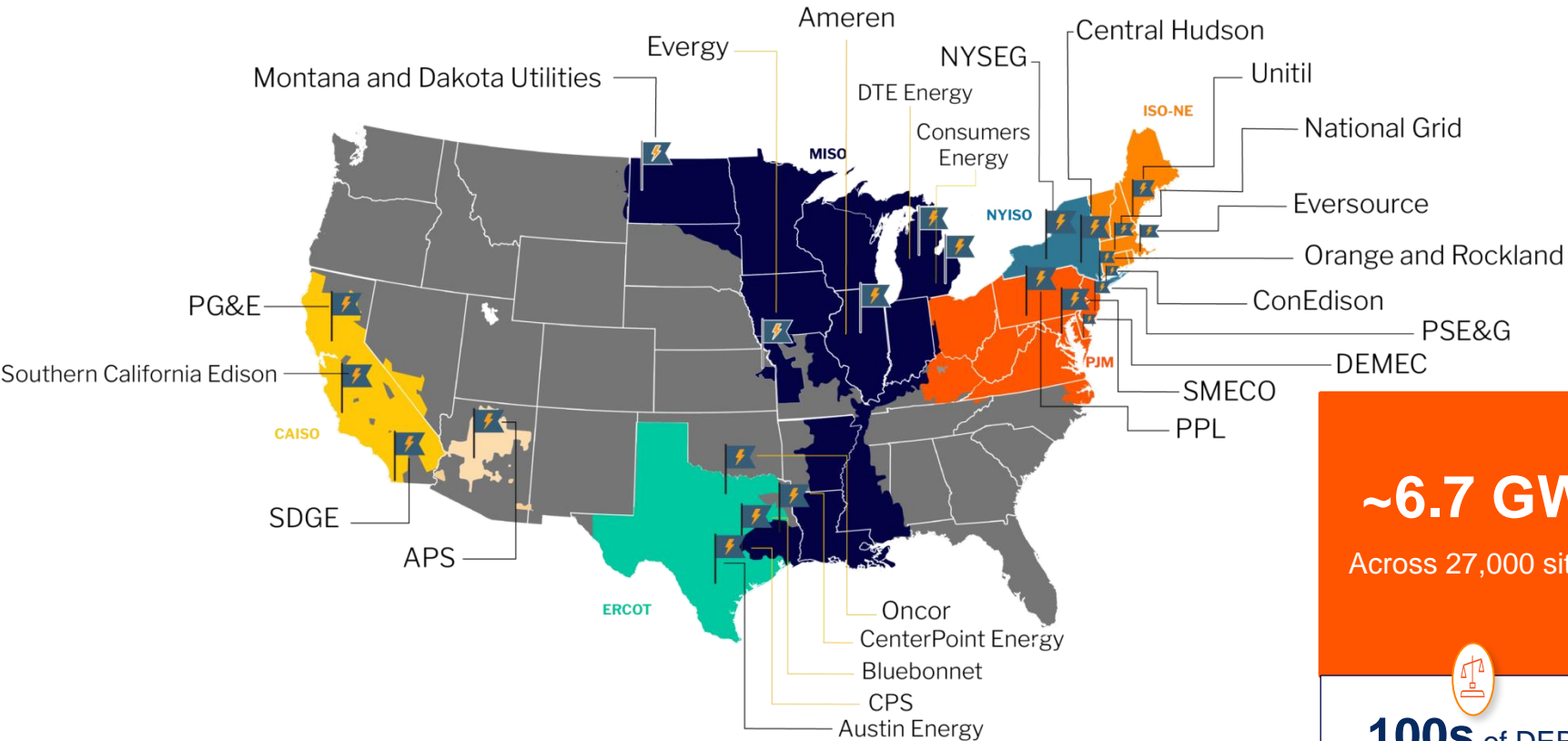
DR/DER Aggregation Issues in Michigan

Aggregation Issues from DTE Rate Case (U-21297) and Consumers
Energy Rate Case (U-21389)


Presentation to MPSC DR/DER Aggregation Workshop
June 5, 2024

CPower Snapshot

CPower offers more than 60 grid services solutions across the US



~6.7 GW
Across 27,000 sites



100s of DER, channel and technology partners, customers across all sectors

\$1B+
Paid out to customers since 2015



95% near perfect customer retention

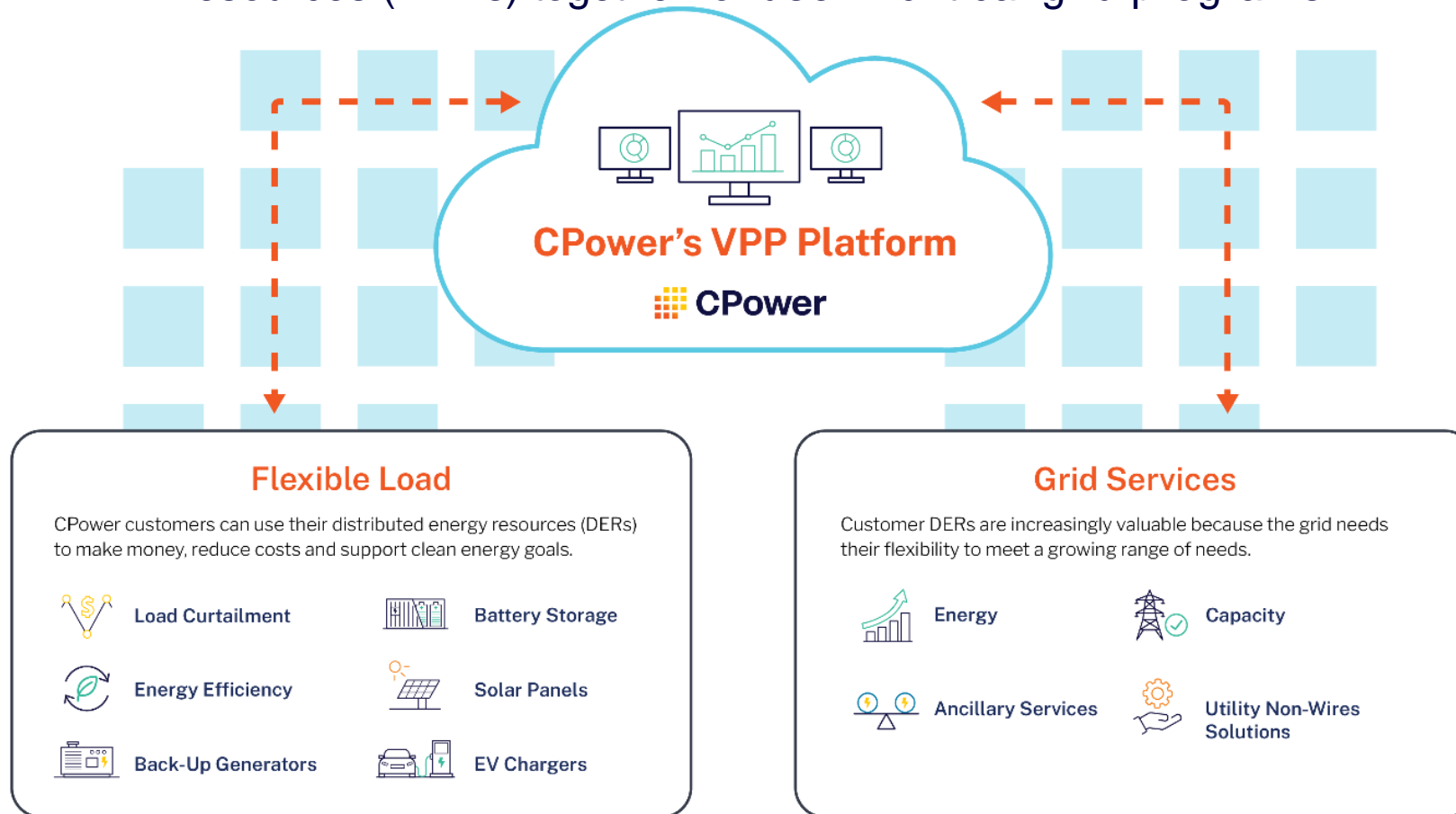
375,000+
Customer CO2 Emissions Avoided in 2022



Equivalent to not burning **420,057,500+** lbs. of coal

CPower's Virtual Power Plant (VPP) Platform

CPower aggregates customers' Distributed Energy Resources (DERs) together for use in critical grid programs

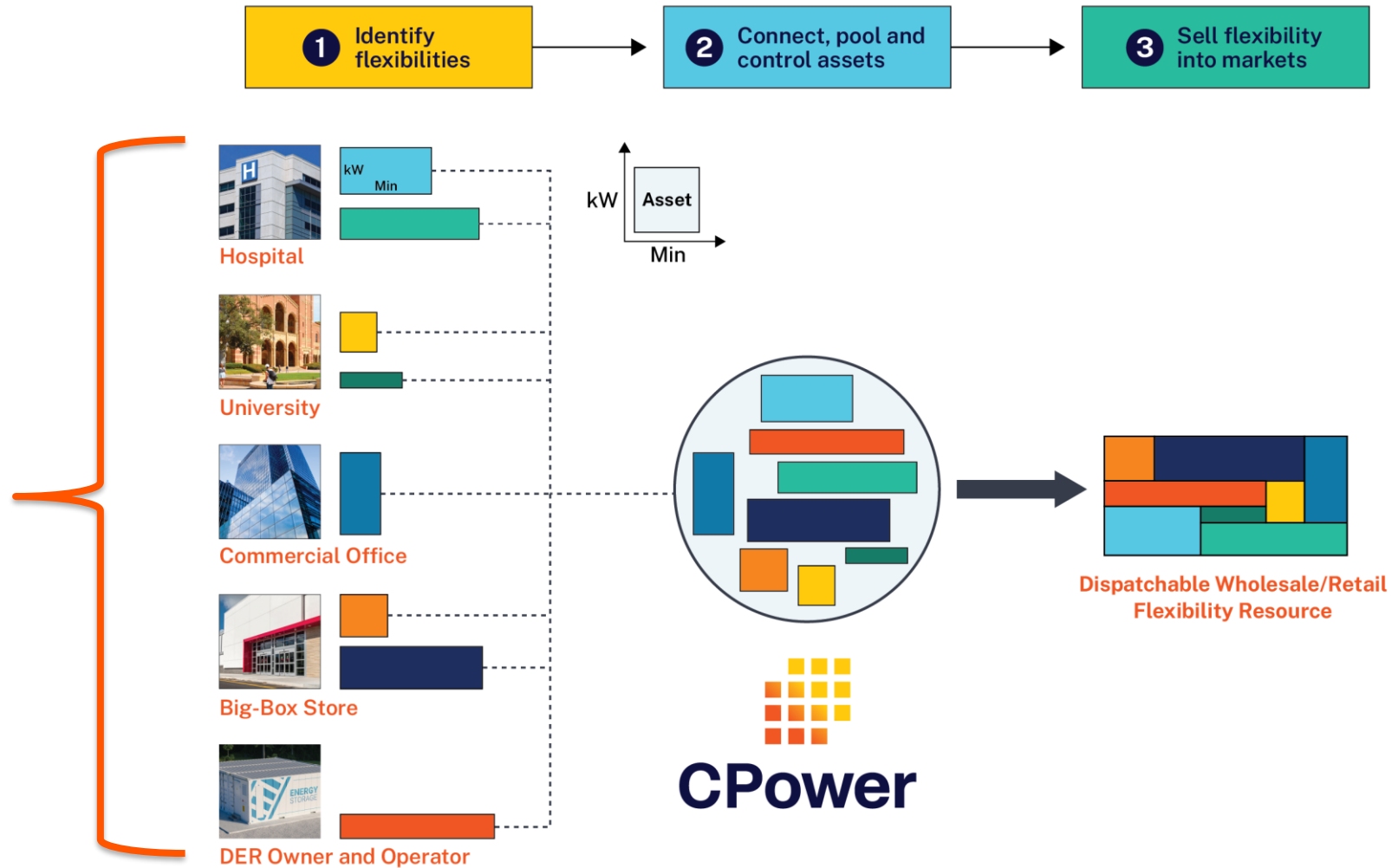


Agenda

- Aggregator Basics
- Harmonizing Wholesale and Retail DR
- Aggregated DR Procurement and Tariff Models

What is Aggregation?

An aggregation of DERs that provides grid services via a coordinated dispatch



Developing behind the meter flexibility.

- Energy experts work with work with facility managers to identify and harness flexibility that does not interfere with their primary business.
- Regulated utilities have liability and jurisdictional constraints on consulting with customers on behind the meter activities.



Worker Safety and Compliance



Protecting Equipment



Quality Control



Productivity

DR Issues From Recent Rate Cases

Procedural Background

- Commission's [December 21, 2022 Order](#) in [Case No. U-21099 et al.](#)
 - Modified partial ban on Aggregators of Retail Customers (“ARC”) to allow ARCs to aggregate bundled service customers of Commission-jurisdictional utilities with 1MW of peak demand (at a single site, or in aggregate with same parent entity)
- DTE Rate Case - [Case No. 21297](#)
 - [December 1, 2023 Commission Order](#)
 - “[T]he Commission directs the Staff to convene a workgroup to consider the following Issues: (1) whether tying of retail and wholesale DR programs by the retail electric provider is appropriate; (2) whether [Feed In Tariff] or other tariff mechanism is needed or advantageous...” (p. 322)
- Consumers Rate Case – [Case No. U-21389](#)
 - [March 1, 2024 Commission Order](#)
 - Directed Consumers Energy to, “...participate in the demand response workgroup established by the December 1, 2023 order in Case No. 21297.” (p. 312)

Issue Framing

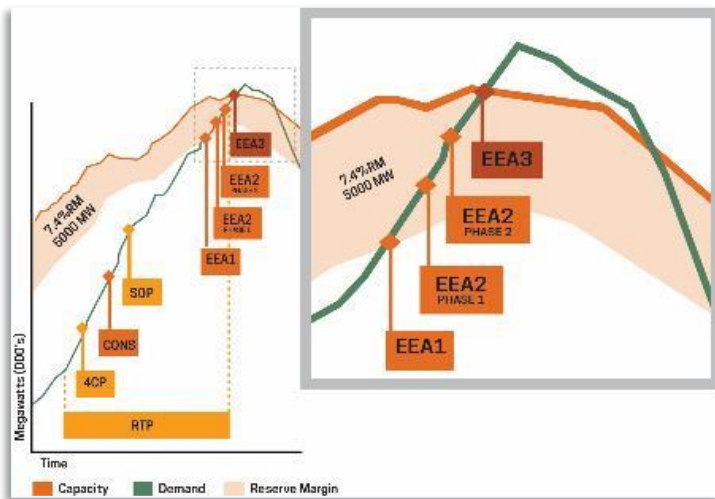
- Following the Commission's action to modify the ARC ban, parties to the DTE and Consumers Energy rate cases raised concerns regarding aspects of existing utility tariffs and programs where wholesale and retail services are bundled together and create an anti-competitive "tying" arrangement.
- Due to issues with the MISO market structure and other issues, parties to these rate cases recommended development of new tariffs or procurement mechanisms through which utilities could procure ARC DR for use in satisfying resource adequacy requirements at MISO and the Commission

Harmonizing Wholesale and Retail DR

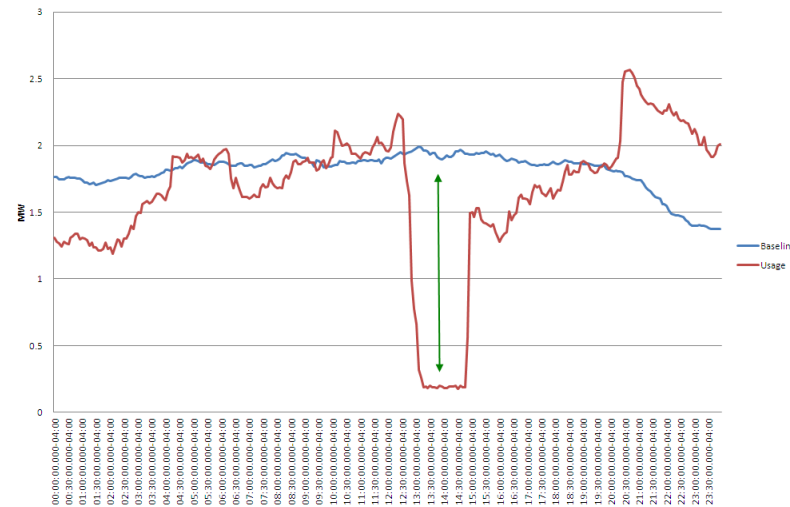
Wholesale and Retail DR

Helps reduce demand when the grid is stressed, or the price of energy is high

Capacity



Energy



Ancillary Services



Retail DR can provide load reductions to provide different benefits to the distribution system

The “Tying” Issue

- “Tying” is the bundling of two or more flexibility services as part of a single sale
- May be anti-competitive when one seller in the market holds a monopoly or market power over one of the products being bundled
- Some MI Utility DR Tariffs and Programs bundle wholesale and retail products together

Ex. 1 - DTE D8 – Interruptible Supply Service

- Customers participating in DTE’s D8 interruptible rate are registered with MISO as LMRs, and therefore ineligible to participate with an ARC
- Customers receive compensation via bill credit for capacity value and reduced \$/kWh rate
- D8 may be dispatched under two different scenarios:
 - System Integrity Interruption Orders (aligns w/LMR dispatch, i.e. a wholesale service)
 - Capacity Deficiency Order – based upon economic parameters to provide a retail service by reducing the LSE load
- During Capacity Deficiency events, customers may opt not to reduce their interruptible load and pay a higher rate (i.e. buy-through/penalty)
- ARCs would need to dual register the customer in both LMR and DRR at MISO to receive energy compensation for customer’s load reduction.

M.P.S.C. No. 1 - Electric
DTE Electric Company
(Final Order Case No. U-21297)

Tenth Revised Sheet No. D-40.00
Cancels Ninth Revised Sheet No. D-40.00

RATE SCHEDULE NO. D8

INTERRUPTIBLE SUPPLY RATE

AVAILABILITY OF SERVICE: Available to customers desiring separately metered service at primary voltage who contract for a specified quantity of demonstrated interruptible load of not less than 50 kilowatts at a single location. Contracted interruptible capacity on this rate is limited to 300 megawatts. *Customers who take service on this tariff are not eligible to participate in another Demand Response program with an Aggregator of Retail Customer (ARC) in any MISO season.*

TESTING PROCEDURES: In accordance with participation in an interruptible tariff, the customer agrees to comply with Company requirements regarding testing procedures. Customer shall complete and sign an interruptible responsibility letter annually by April 1st. Failure to sign and submit the interruptible responsibility letter may result in removal from this interruptible tariff. The letter designates that the customer understands their responsibility to interrupt, has an interruption plan, and has the capability to interrupt the contracted load. In addition, the Company will conduct multiple simulations each year to verify the communication system is working properly.

HOURS OF SERVICE: 24 hours, subject to interruption by agreement, or by advance notice.

CURRENT, PHASE AND VOLTAGE: Alternating current, three-phase, nominally at 4,800, 13,200, 24,000, 41,570 or 120,000 volts at the option of the Company.

CONTRACT CAPACITY: Customers shall contract for a specified capacity in kilowatts sufficient to meet maximum interruptible requirements, but not less than 50 kilowatts. Any single reading of the demand meter in any month that exceeds the contract capacity then in effect shall become the new contract capacity. The interruptible contract capacity shall not include any firm power capacity, except under Product Protection Provision.

CONDITIONS OF INTERRUPTION: All interruptible load served hereunder shall be subject to Capacity Deficiency Orders and System Integrity Interruption Orders.

A Capacity Deficiency Order is a pricing provision that permits a customer to choose to pay higher hourly energy rates when (a) energy prices to the Company in the Midwest ISO energy market are above the D8 energy rate and (b) the Company’s available generation assets are insufficient to meet the Company’s full service load. The customer has the choice of either paying higher energy rates through the non-interruption fee or avoid paying the higher energy rates by reducing or interrupting load, at the customer’s discretion.

CONDITIONS OF INTERRUPTION: All interruptible load served hereunder shall be subject to Capacity Deficiency Orders and System Integrity Interruption Orders.

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A System Integrity Interruption Order is a non-discretionary order requiring a customer to interrupt load. All interruptible load served hereunder shall be subject to interruption by the Company in order to maintain system integrity. A System Integrity Interruption Order may be given by the Company when the failure to interrupt will contribute to the implementation of the rules for emergency electrical procedures under Section C3.

Ex. 2 – Consumers Energy Business DR Contractual Program

- Consumers Energy’s Business Contractual DR program
 - Registered as LMRs with MISO (*wholesale* service) and receive a fixed \$/MWh value for the Resource Adequacy value (established in the contract), and not in any other MISO products
 - During “in season” (i.e. Summer) event, customers are compensated at \$50/MWh for the Delivered Capacity (energy reduction achieved according to MISO’s Calculated Baseline M&V calculation)
 - Outside of the main performance season, Consumers could call it’s own Emergency Events, for which customers are paid \$1,000/MWh for the Delivered Capacity.
 - MISO does not compensate LMRs for energy during events. During events called inside and outside of the main program period, Consumers compensates customers for a retail DR service made possible by participant load reduction
 - As in the DTE example, ARCs would have to register customers as DRRs to receive MISO market compensation for energy reductions.

Wholesale DR and Retail DR are compatible

- Wholesale DR is a complementary service to Retail DR.
- Retail DR costs less with simultaneous participation in Wholesale DR.
- Double counting is easy to avoid.
- Can be structured to be fully compatible so that utility and customers derive value from both.
- Value of DR and the incentives may be muted or diminished if try to achieve both in one approach.

Program Stacking

Enable discrete wholesale and retail services to be broken out. Customer capabilities to “stack” services to maximize participation, while preventing double-counting and compensation.



Customer 1

Wholesale

- Ancillary Services
- Energy
- Capacity

Retail

- Non-Wires Alternatives
- Economic



Customer 2

Wholesale

- Ancillary Services
- Energy
- Capacity

Retail

- Non-Wires Alternatives
- Economic



Customer 3

Wholesale

- Ancillary Services
- Energy
- Capacity

Retail

- Non-Wires Alternatives
- Economic



Customer 4

Wholesale

- Ancillary Services
- Energy
- Capacity

Retail

- Non-Wires Alternatives
- Economic

CPower Recommendations

- Bifurcate/unbundle existing retail tariff mechanisms to separate out wholesale and retail service value streams
- Identify wholesale services which may conflict with retail services and implement conditions in retail tariffs to prevent double-counting and duplicate compensation
- Enable aggregator participation for retail services alongside participating at wholesale
- Enable “Value Stacking”
- Enable dual participation at wholesale and retail

Utility Procurement of ARC DR

Overview of Procurement Issues

- MISO Planning Resource Auction (PRA)
 - PRA conducted for prompt year only – no forward market
 - Registration timeline - resources must be registered prior to PRA
 - Price uncertainty for ARCs and customers
 - PRA Auction Clearing Price volatility
 - Thinly traded, primarily residual market
- Other Existing Procurement Mechanisms
 - Certificate of Need (CON) – MCL 460.6s
 - Infrequent CON events, specific reference to “generation” in language
 - MPSC Procurement Guidelines
 - Truly “All Source” procurement events are limited, DR excluded
 - Bilateral market
 - Viable option, but dependent upon the utility’s need to procure Zonal Resource Credits (ZRC)

Models for working with ARCs

DR Feed In Tariff

Utility procures DR through a tariff to meet its MISO capacity needs.

DR PPA

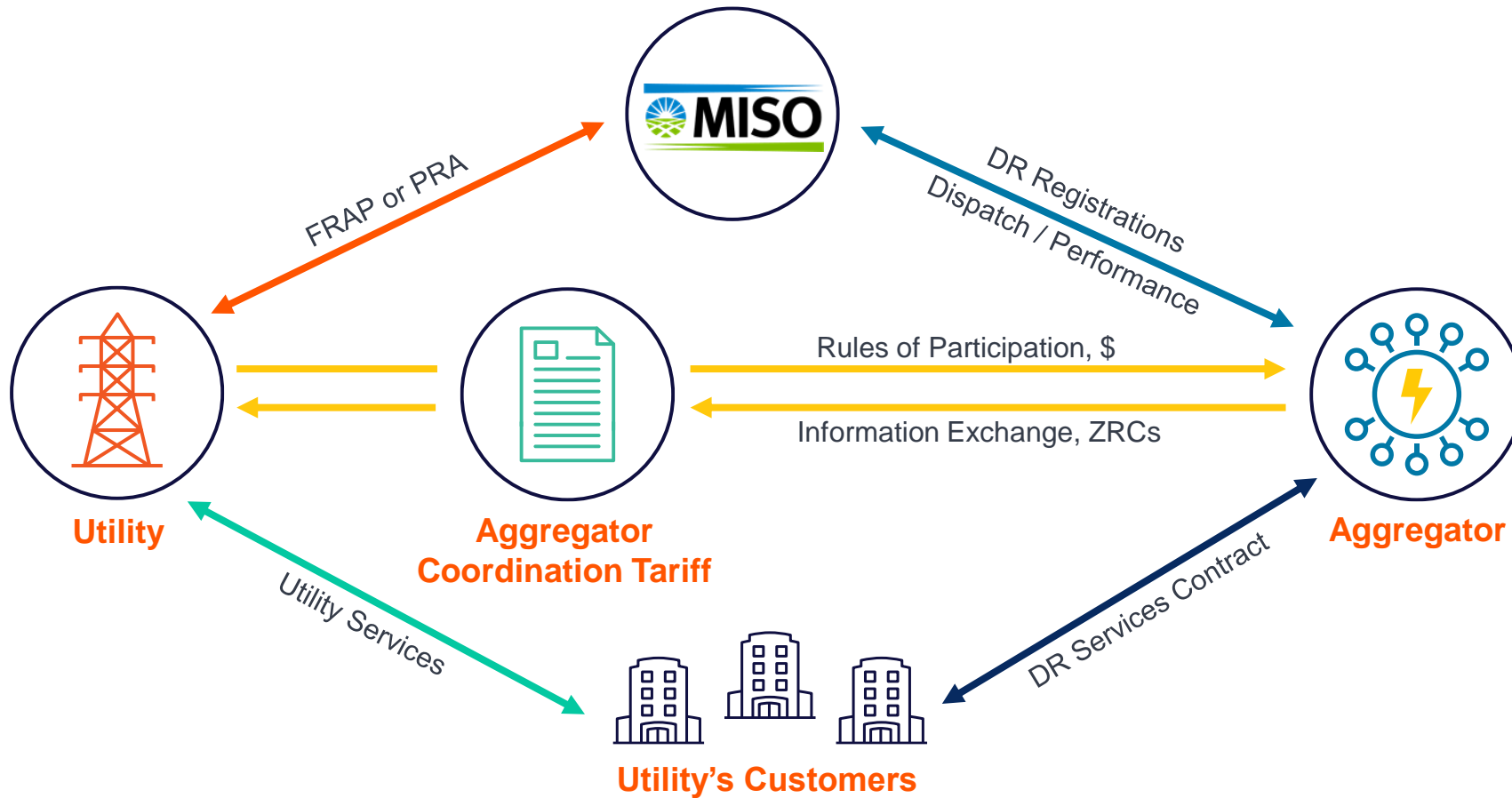
Same model as DR FIT, except a PPA contract replaces the tariff and customers may also come from elsewhere in the zone.

Aggregator Coordination Tariff

Utility does not procure the DR, but Aggregator Coordination Tariff governs requirements and information sharing. DR participation supports reliability.

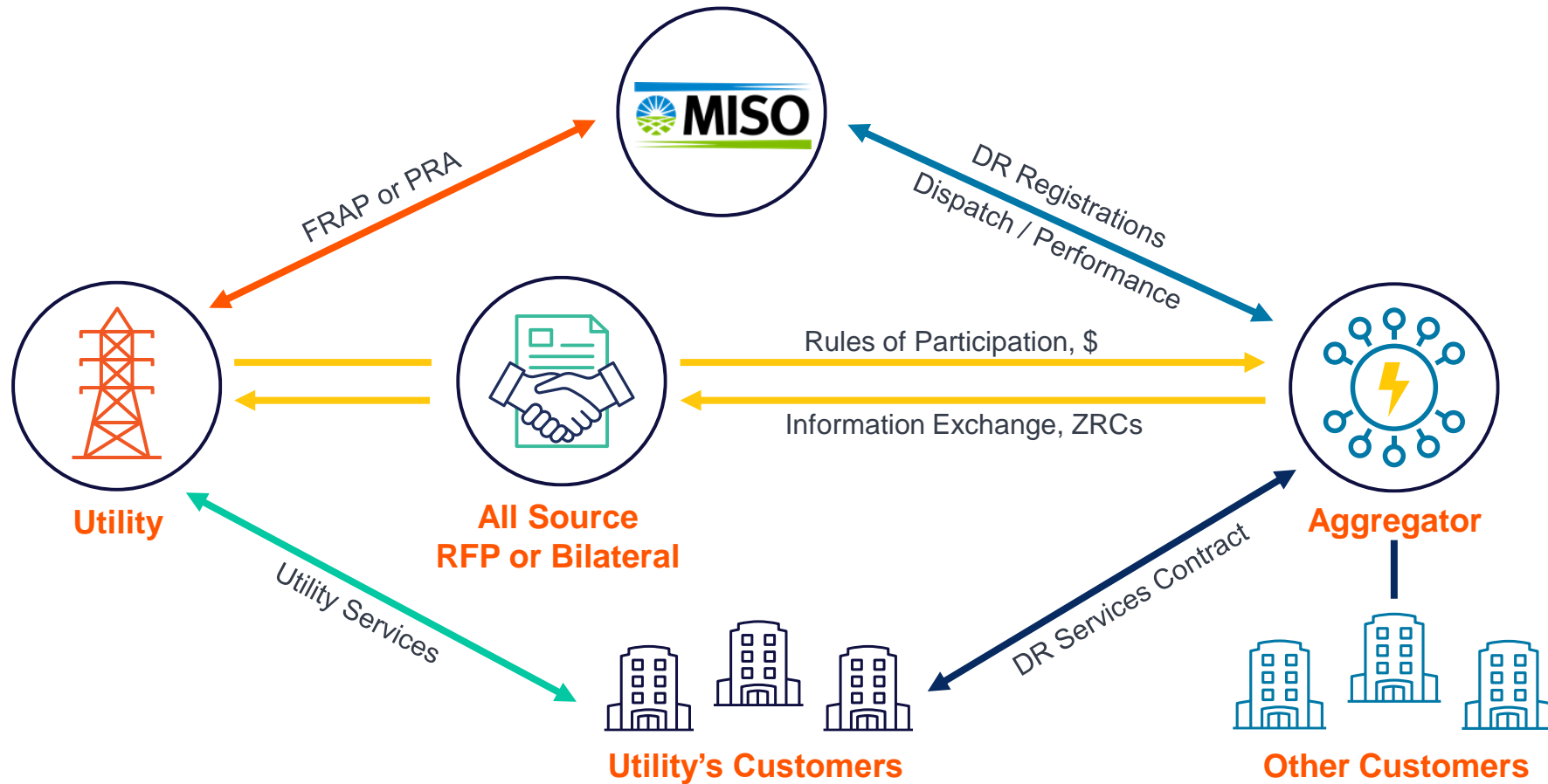
DR Feed in Tariff

Utility procures DR and establish rules through a tariff applicable to aggregators.



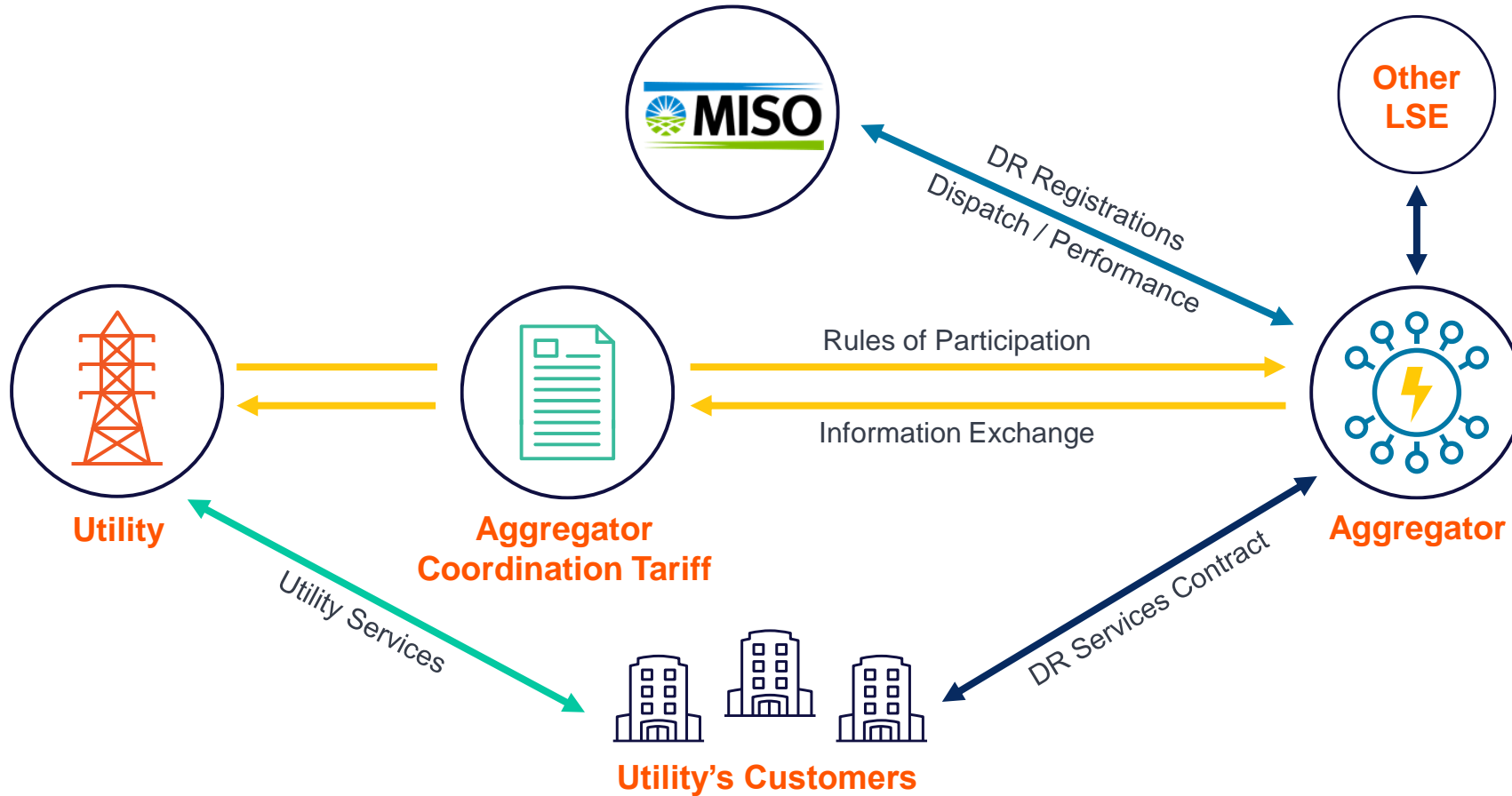
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Aggregator Coordination Tariff

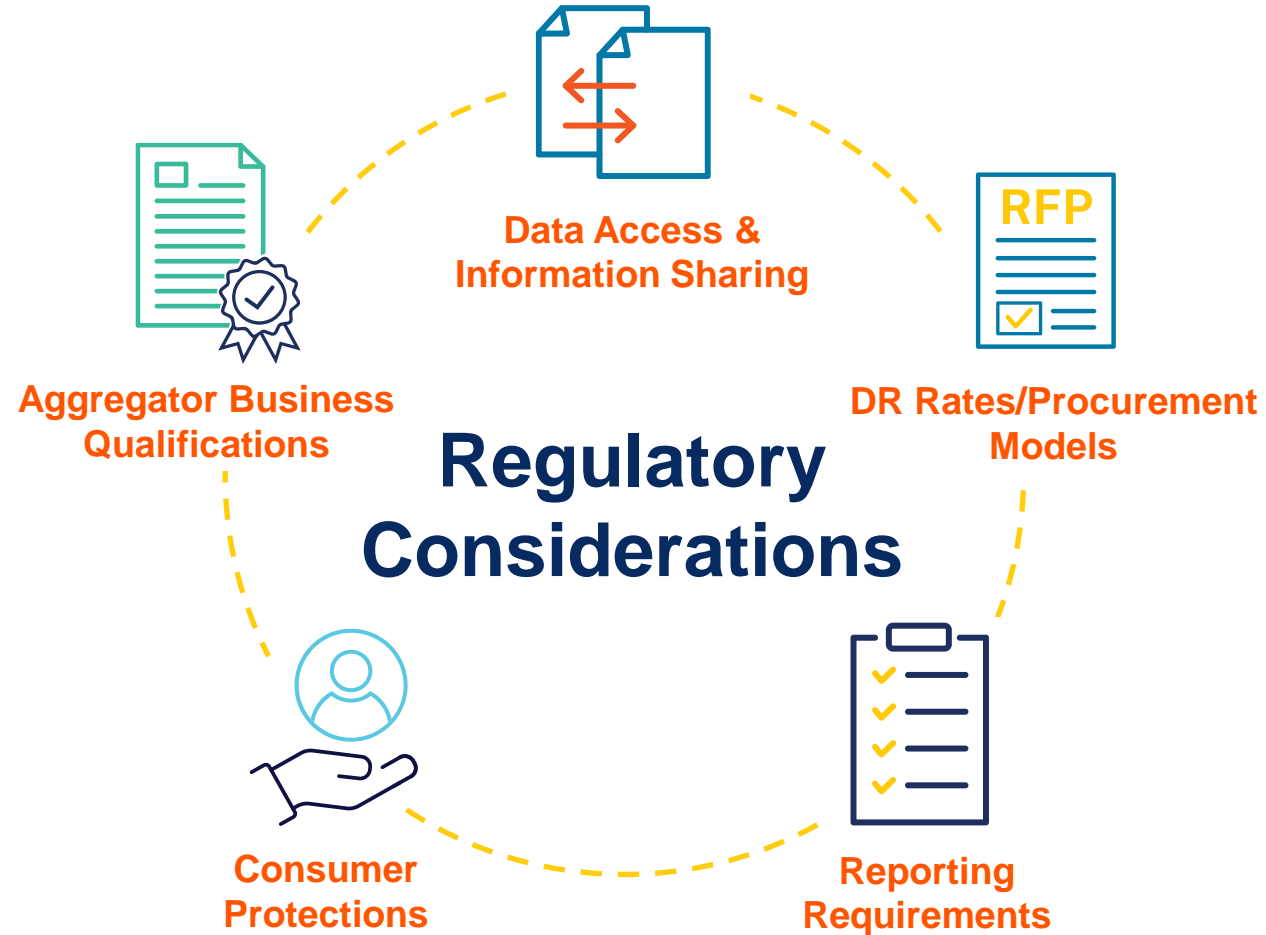
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Comparison Summary of Models

ARC Participation Model	Allows Commission Oversight	Contributes to Utility/LSE Resource Adequacy	Maximizes Latent DR Potential	Enables ARC-Provided Benefits	Allows Customer Selection of DR Provider
DR Feed In Tariff	Yes	Yes	Yes	Yes	Yes
DR PPA	Yes	Yes	Yes	Yes	Yes
ARC Coordination Tariff	Yes	Yes	Yes	Yes	Yes
Traditional Utility DR Tariff/Program	Yes	Yes	No	No	No

Considerations for Regulating Aggregators



CPower Recommendations

- Adopt alternate procurement options
 - DR FIT
 - DR PPA
- Develop ARC Coordination Tariff
- Regulatory Oversight
 - Alternate procurement models enable regulatory oversight by the MPSC
 - May allow the Commission to expand participation through ARCs to smaller customer classes.

Thank you!

Questions?

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Additional Resources

- CPower Whitepaper - [Midwest DR Framework](#)
- Alternative Electric Supplier tariff examples for starting point for developing ARC Coordination Tariff
 - DTE's Retail Access Service Rider EC2, available at: <https://www.dteenergy.com/content/dam/dteenergy/deg/website/common/quicklinks/electric-choiceprogram/retailAccessServiceRider.pdf>
 - Section E of Consumers Energy's Tariff for Retail Open Access (ROA) Service Standards, available at: <https://www.consumersenergy.com//media/CE/Documents/rates/electric-rate-book.pdf>
- RMI VPP Policy Principles - <https://rmi.org/insight/vpp-policy-principles/>

Additional Resources (cont'd)

- Certificate of Need – MCL – 460.6s
 - <https://legislature.mi.gov/Laws/MCL?objectName=mcl-460-6s>
 - See subsection (13) for problematic language for DR eligibility
- MPSC Competitive Procurement Guidelines
 - See Exhibit A in the September 9, 2021 Commission Order in [Case No. U-20852](#), available at: <https://mi-psc.my.site.com/sfc/servlet.shepherd/version/download/068t000000TTDJAAA5>
- DTE IRP – [Case No. U-21193](#)
 - See Section 18.b (pp. 8-9) of the July 26, 2023 Commission Order, available at: <https://mi-psc.my.site.com/s/case/5008y000002yQhVAAU/in-the-matter-of-the-application-of-dte-electric-company-for-approval-of-power-purchase-agreements-and-other-relief>