

Summary 1	Assignee	Labels	Environment	Key	Description	Resolved
					binary flexibility is exemplified by Figure 4. In this example, there is no price at which the aggregate supply or demand quantity magnitude can be reduced to zero. A step appears at the strike price of the object offering binary flexibility. If CTS were to support the supply and demand aggregations of example of Figure 4, it would need to communicate at least two price/quantity pairs. However, it would be better for CTS to support a greater or indefinite number of such pairs if rich aggregations of supply and demand are to be represented. Incidentally, an aggregate curve could very well include both supply (positive quantity) and demand (negative quantity) and demand (negative quantity) price/quantity pairs, as would be needed for the indifference supply/bid curve from a battery system performing arbitrage. I recommend the consistent use of signed quantities, like those of panels (b) and (c), because the use of signed quantity avoids separation of an object's supply and demand components, as must be done when using unsigned quantities (i.e., panels (a)). Furthermore, the practice of using signed quantities greatly facilitates aggregation, requiring simply that objects' quantities be added at all defined strike prices, including inflexible quantities at strike price oc. See attachment (URI in environment) for graphics	
Alignment of Market Price Granularity and Stream Price Granularity	Toby Considine	CLARITY	Toby Considine - Editing Note	ENERGYINTEROP-738	In Streams, we defined Price Granularity as follows Stream Price Granularity Price granularity expressed as an exponent. Applies to all Intervals in the Stream. Not required for all Facets. For example, if the price granularity is -3, and the value is 1500, the price is 1.500 currency units. And in Market (Product) definition we have: Price Granularity PRICE_GRAIN The allowed price unit, e.g. Price Granularity == 10 means that that any multiple of 10 CURRENCY units is acceptable, but any price not matching, say a price of 9 CURRENCY units, is rejected. We need to make sure that we do not create confusion between these two definitions.	23/Mar/22
Are EiQuote and EiDelivery needed?	Toby Considine	FACET	Edward G. Cazalet, TEMIX https://lists.oasis-open.org	ENERGYINTEROP-685	9. The omission in the Proposal of EiQuote is not an improvement as this service should	23/Mar/22

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			/archives/energyinterop- comment/202111/msg00001 /Cazalet_Comments_on_CTS.pdf		never have been in TEMIX. Likewise, the Proposal's omission of the EiDelivery service makes no sense, especially as the Proposal has a significant discussion of Delivery.	
Are Independent Markets required?	William Cox	(CLARITY) (MARKET)	Edward G. Cazalet, TEMIX https://lists.oasis-open.org /archives/energyinterop- comment/202111/msg00001 /Cazalet_Comments_on_CTS.pdf	ENERGYINTEROP-687	11. While the Proposal includes bilateral transactions, the Proposal's favored alternative of independent, local clearing markets (market engines) is unworkable in a grid where fine locational and time granularity is essential, and liquidity of tenders is minimal.	22/Feb/22
Bias in Matching Algorithm	William Cox	(CLARITY) (MARKET)	Trevor Hardy, PNNL https://lists.oasis-open.org /archives/energyinterop- comment/202111 /msg00000.html	ENERGYINTEROP-673	page 16 line 261-262 It has already been stated that CTS does not prescribe the nature of the matching engine but doesn't the definition of part and counter-party at least strongly imply some kind of matched bi-lateral trade? Double-auctions can artificially create the appearance of bi-lateral trades after the clearing price and quantity have been established but it would be a layer of artifice. For the concept of "party" and "counter-party" to be an integral part of CTS seems to heavily lean towards bi-lateral matching engines.	22/Feb/22
Binary Flexibility	William Cox	MARKET	Donald Hammerstrom https://lists.oasis-open.org /archives/energyinterop- comment/202111/msg00008 /2111DJH_CTS_Review.pdf	ENERGYINTEROP-701	CTS is suited for representing the binary flexibility of individual supply or demand objects. CTS is perfectly able to represent an offer from a conventional fueled generator, for example. The generator offers a quantity of supply at a strike price. The generator may become dispatched if the quantity is paired to willing demand via bilateral trading. Alternatively, the generator may become dispatched by a market if the market clears at a price greater than or equal to the strike price. It is irrelevant how the transactions proceed, but the CTS is suitable for either bilateral trades or real-time bilateral markets. CTS can represent simple binary flexibility from an object. CTS could represent a bid from a residential water heater to consume a quantity of electricity, for example. The control action is binary. If the bid is accepted, the water heats water; if the bid is not accepted, it waits idle. CTS could have been used for PNNL's Olympic Peninsula field study, for example, which created a real-time double auction and managed devices as described in this paragraph.	23/Mar/22

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					However, the applicability of such binary	
					flexibility works only for relatively short time	
					intervals. Many end-use devices must	
					eventually operate and provide a utility to	
					their owners, which is why applicability of	
					CTS may be limited to short-term, real-time	
					market intervals. Over long time intervals	
					such devices cannot remain off. An unstated	
					requirement of CTS is apparently that it	
					requires a pre-existing market position or	
					baseline, and a CTS-based offer or bid	
					represents a diversion from that baseline. It	
					does not seem that CTS can represent the	
					baseline itself,however, although its parent	
					EMIX is said to have this capability.	
					It is argued that CTS can represent	
					aggregated supplies and demands. For	
					example, a bid or offer could be made via	
					CTS for an entire building or for the entities	
					within an energy microgrid. But this works	
					only if the aggregate flexibility remains	
					binary and can be represented at a single	
					strike price. This limits the communication	
					of priorities, as would be possible using	
					supply and demand curves, where quantity	
					may be a rich function of price alternatives.	
					CTS can apparently flag a bid or offer to	
					indicate that its quantity may be partially	
					accepted, but all subquantities then	
					possess the same strike price. CTS also	
					may communicate multiple "Tender" offers	
					to buy or sell, but it does not address the	
					association of such alternatives into a	
					cohesive supply or demand curve and the	
					resulting mutual exclusivity of such	
					alternatives.	
					The commonality between all binary	
					flexibility is that it can be represented by the	
					pairing of a single quantity and single strike	
					price. Figure 1 shows three alternative	
					graphical representations of a CTS bid (or,	
					more generally, of a single object's binary	
					bid or offer). Panel (a) is a conventional way	
					of showing supply and demand, as adopted	
					from wholesale electricity practices. Both	
					supply and demand are shown as positive	
					quantities in the same quadrant. The	
					top, right corner of the supply block is the	
					offered quantity and strike price. Panel (a)	
					shows a single offer. Demand is typically	
					shown as a line. Here an inflection occurs at	
					the demand quantity and strike price.	
					Panels (b) and (c) are alternative	
					representations that use signed quantities	
					and prices. The	

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					only differences between the two panels is that (b) shows price as a function of signed quantity, and (c) shows signed quantity as a function of price. While these functional relationships could be mathematically represented in many ways, this white paper will use a piecewise linear approach, which provides a pathway for extension of CTS quite naturally to a broader set of TE applications. A CTS bid or offer requires a single pairing of price and quantity (i.e., a single "vertex"), but a second point is implied for the alternative binary action—the quantity zero at the strike price. This distinction is subtle, but it is important to the extensibility of CTS. Namely, CTS will be extensible if it explicitly includes what is now an implicit price/quantity pairing. Incidentally, all bid and offer prices should be understood to, in effect, extend to positive and negative infinity as shown in panels (b) and (c). See attachment (URI in environment) for graphics	
CTS incompatible with CTS 2016	William Cox	(ARCH-CONF)	Edward G. Cazalet, TEMIX https://lists.oasis-open.org /archives/energyinterop- comment/202111/msg00001 /Cazalet_Comments_on_CTS.pdf	ENERGYINTEROP-690	14. The Proposal for Common Transactive Services (CTS) offers no more interoperability (likely less because of flaws) than TEMIX. As a result, CTS is oversold in this Proposal. In addition, the Proposal does not fully implement and is incompatible with the CTS in CTS2016 for reasons described above.	23/Mar/22
Conformance with WS-Calendar	Toby Considine	(ARCH-CONF)	H Walter Johnson https://lists.oasis- open.org/archives /energyinterop-comment /202111/msg00007.html	ENERGYINTEROP-697	When discussing Conformance (Section 14), line 780 says Portions of CTS conform to and use updated and simplified versions of the specifications. I guess it's possible for a spec's conformance rules to allow the CTS spec to both conform to it and to extend it, but it does sound somewhat paradoxical. Besides, the WS-Calendar spec says [lines 1553-1554] that "Specifications thatclaim conformance with WS-Calendar SHALL define the business meaning of zero duration Intervals and I don't find that in the CTS spec.	07/Feb/22
Definition of Transaction inconsistent with EI	William Cox	(ARCH-CONF) (CLARITY)	Edward G. Cazalet, TEMIX https://lists.oasis-open.org /archives/energyinterop- comment/202111/msg00001 /Cazalet_Comments_on_CTS.pdf	ENERGYINTEROP-681	4. The definition of a Transaction in the Proposal is different from TEMIX for no apparent reason.	22/Feb/22
Distribute Tender	Toby Considine	FACET	Horia Pop; Lateral Inc https://lists.oasis-open.org /archives/energyinterop-	ENERGYINTEROP-727	Tender Facet â Distribute Tender I cannot find a practical use or understand the need for EiDistributeTender payload.	08/Feb/22

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			comment/202112 /msg00001.html		[Lines 549]	
Editorial - Consistent Abbreviations and Casing	Toby Considine	editorial	Donald Hammerstrom https://lists.oasis-open.org /archives/energyinterop- comment/202111/msg00008 /2111DJH_CTS_Review.pdf	ENERGYINTEROP-708	There are 30 specific recommendations in the "Specific Recommendations" section of the submitted Hammerstrom paper. I have numbered them all for traceability as I recombine them into specific issues. The original white paper/submission can be read in the URI under "environment"There are 30 specific recommendations in the "Specific Recommendations" section of the submitted Hammerstrom paper. I have numbered them all for traceability as I recombine them into specific issues. The original white paper/submission can be read in the URI under "environment" 5. Section 1.6: Do not jump between use of "EI," "Energy Interoperation," and "Energy Interoperation 1.0." I presume these are all covered by acronym and reference "[EI]". 17. Throughout: Consistent capitalization of "Products", "Instruments", "Transactions", etc. is needed. • Section 4.1 and throughout: I'm finding usage of "facet" to be misleading and confusing. These must be properties of some object or class or references to objects' behaviors. Part of the problem perhaps evolves from the double meaning of "transaction" that is being allowed. At times it refers generally to an interaction between Parties; at other times, it refers to a specific state of that interaction after a Tender has been accepted and contracted. If this confusion were resolved, you could make clearer reference to the various properties and states that surround interactions between parties. 18. Throughout: Once defined, use "[EI]" consistently.	01/Mar/22
Editorial Minor	Toby Considine	editorial	H Walter Johnson https://lists.oasis- open.org/archives /energyinterop-comment /202111/msg00007.html	ENERGYINTEROP-698	Line 356: "that to shallow" should probably read "that are too shallow". Line 668, "report and power" should probably read "report any power". Line 712: "match buy and" should probably read "match buyer and". Line 912: "seller increase" should probably read "seller to increase" Line 914-15: "the sender" should probably read something like "the	01/Mar/22

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					identities of the sender". Line 916: "able detect" should probably read "able to detect".	
Eliminate Cancel Tender	Toby Considine	FACET	Edward G. Cazalet, TEMIX https://lists.oasis-open.org /archives/energyinterop- comment/202111/msg00001 /Cazalet_Comments_on_CTS.pdf	ENERGYINTEROP-684	8. The Cancel Tender operation cannot be required in any TEMIX implementation because a Party executing more than one transaction cannot rely on both transactions being executed. Moreover, tender cancelation can be an invitation to market manipulation.	23/Mar/22
End-Party Participation unhelpful	William Cox	MARKET	Edward G. Cazalet, TEMIX https://lists.oasis-open.org /archives/energyinterop- comment/202111/msg00001 /Cazalet_Comments_on_CTS.pdf	ENERGYINTEROP-688	12. End Party participation in local clearing markets offered in the Proposal will typically see low participation and low liquidity, so such markets will be inefficient and unworkable except perhaps in exceptional circumstances.	01/Mar/22
Expiration of Tender rule too restrictive	Toby Considine	FACET	Edward G. Cazalet, TEMIX https://lists.oasis-open.org /archives/energyinterop- comment/202111/msg00001 /Cazalet_Comments_on_CTS.pdf	ENERGYINTEROP-682	6. In conflict with the Proposal, there are valid use cases for a tender that expires after the start time of the associated interval.	08/Feb/22
General Recommendations	Toby Considine	(ARCH-CONF)	Donald Hammerstrom https://lists.oasis-open.org /archives/energyinterop- comment/202111/msg00008 /2111DJH_CTS_Review.pdf	ENERGYINTEROP-705	Here is a summary of how CTS might be modified to extend its applicability to the future cases discussed in this white paper: 1. Select and use a sign convention that will allow electricity quantity to be consistently expressed as a signed quantity. 2. Consider the practice of supporting sets of price/quantity pairs (i.e., vertices) to approximate the functional relationships between price and quantity in a single time interval. This would be a natural extension to CTS, which currently supports a single price/quantity pair. 3. Specify a price (e.g. ∞) to indicate inflexibility. The pairing of this indication with a quantity would thereby represent a constant, inflexible supply or demand quantity. Upon completing this extension, the use of existing baseline quantities can become a design option rather than implied necessity. Regardless, documentation should not be silent concerning this current limitation of CTS to only flexible supply and demand components, which implies the need for a baseline apart from CTS. 4. CTS appears to be silent concerning the effects of location. While it is claimed that locational impacts are in scope, it is not clear that an Actor's circuit location must be communicated. See attachment (URI in environment) for	23/Mar/22

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					graphics	
Hiding from Actors	William Cox	MARKET	Trevor Hardy, PNNL https://lists.oasis-open.org /archives/energyinterop- comment/202111 /msg00000.html	ENERGYINTEROP-674	page 16 line 273 Doesn't the nature of the matching engine define the nature of the messages needing to be exchanged? Submitting tenders to an order book can require the communication of different information than that of a double-auction (point price-quantity pairs vs full supply or demand curves). Doesn't this require that the Actors are aware of this when submitting messages? I don't understand how "this complexity is hidden from the Actors".	23/Mar/22
Inappropriate Issues	Toby Considine	editorial	Trevor Hardy, PNNL https://lists.oasis-open.org /archives/energyinterop- comment/202111 /msg00000.html	ENERGYINTEROP-675	page 18 line 304 These questions seem out of character to include in a standard.	01/Mar/22
Include market characteristics for trading strategy development	William Cox	(FACET) (MARKET)	William Cox	ENERGYINTEROP-740	Certain market characteristics dictate aspects of trading strategy. For example, if the clearing use Double Auction approaches versus Order Book, the meaning and effect of low or negative bid differs. The set of Market Characteristics should be extended to enable realistic trading behavior and strategies.	23/Mar/22
Linear Price Sensitivity	William Cox	MARKET	Donald Hammerstrom https://lists.oasis-open.org /archives/energyinterop- comment/202111/msg00008 /2111DJH_CTS_Review.pdf	ENERGYINTEROP-703	Transactive energy systems should also be able to represent non-binary opportunities like price-sensitive quantities. See Figure 3. The use of price sensitivity in bids and offers can improve the accuracy and effectiveness of energy balance achieved via auctions, especially as the system diverges from its normal, expected trajectory. Complete bid and supply curves can also reduce the numbers of iterations needed to discover prices using iterative consensus and game price-discovery mechanisms. Price sensitivity appears quite naturally in conventional generator supply curves that are typically derived from their quadratic cost curves. If a cost curve is truly quadratic (not linear), offer prices are a linear function of generated quantity. Price sensitivity also appears in transactive energy systems that discover price via centralized or distributed locational marginal pricing algorithms. Most notable is the effect of transport losses that make price become a function of system losses, which are in turn a function of transported quantity.	23/Mar/22

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					Price sensitivity comes into play for most controllable DER when time intervals become longer than what can be accommodated using binary on/off binary flexibility. Simple heuristic methods (e.g., thermostat bids based on zone temperatures) begin to fail when applied to relatively long future prediction horizons and long market intervals. Under these cases, bids and offers must more accurately predict the actual energy quantity and the impacts of any flexibility. One strategy is to optimize the likely outcome while monetizing the state of the utility (e.g., comfort or discomfort level) that is provided. The result of such an optimization is an indifference curve that expresses the willingness of a prosumer to exchange energy and money. As suggested by Figure 3, CTS might be extended to support simple price sensitivity from an individual object if it were to support a second price/quantity pair. However, the next section will argue that CTS should preferably support communication of many price/quantity pairs if it is to represent effects of aggregation. Even individual objects might require multiple price/quantity pairs when their price sensitivity cannot be adequately represented by only two price/quantity pairs. See attachment (URI in environment) for graphics	
Market Cloudiness	William Cox	CLARITY MARKET	Donald Hammerstrom https://lists.oasis-open.org /archives/energyinterop- comment/202111/msg00008 /2111DJH_CTS_Review.pdf	ENERGYINTEROP-709	There are 30 specific recommendations in the "Specific Recommendations" section of the submitted Hammerstrom paper. I have numbered them all for traceability as I recombine them into specific issues. The original white paper/submission can be read in the URI under "environment" 8. Table 2-1: Row "Market Context": Acronym "URI" has not been previously defined and should be spelled out on its first use, please. 9. Table 2-2: Facet "Marketplace" might be needed where multiple markets exist. • The Market is an object from among Marketplaces and may have numerous attributes. 21. Section 6: This is finally made clear that the "Market Facet" refers to a defined query behavior or "interaction profile." Why not use an informative, intuitive name like	22/Feb/22

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					"Request Market Characteristics" instead of inventing all these "facets"?	
Market Rules Enforcement	Toby Considine	(FACET) (MARKET)	Horia Pop; Lateral Inc https://lists.oasis-open.org /archives/energyinterop- comment/202112 /msg00001.html	ENERGYINTEROP-720	Market Rules Enforcement Until the standard covers the facets, operation, and information models of an auditor and enforcer actor, the free interoperation of distinct conforming implementation is going to be hindered. It is hard to imagine a vendor accepting a standard-conforming actor with a distinct implementation to trade freely, knowing it can introduce malicious behavior and that thereâs no standard way to inhibit it that the actor would oblige by. [Lines 195]	23/Mar/22
Market-Product-Resource Relationship	Toby Considine	CLARITY (MARKET) (RES-PROD-INSTR)	Horia Pop; Lateral Inc https://lists.oasis-open.org /archives/energyinterop- comment/202112 /msg00001.html	ENERGYINTEROP-722	Market-Product-Resource Relationship In a few places in the standard, there is vagueness that can be misinterpreted around the cardinality relationship between a market, product, and resource. [Lines 249 Table 2-1]	22/Feb/22
Missing Functionality	William Cox	MARKET	Donald Hammerstrom https://lists.oasis-open.org /archives/energyinterop- comment/202111/msg00008 /2111DJH_CTS_Review.pdf	ENERGYINTEROP-700	. CTS therefore may lack functionality needed for some emerging transactive energy systems. Specifically, the standard lacks abilities to represent Inflexible supply or demand Price-sensitive supply or demand Aggregation of supply offers and demand bids There are potentially elegant ways to extend CTS to facilitate these capabilities that are currently missing from the draft standard.	23/Mar/22
Missing Transport	Toby Considine	CLARITY (RES-PROD-INSTR)	Edward G. Cazalet, TEMIX https://lists.oasis-open.org /archives/energyinterop- comment/202111/msg00001 /Cazalet_Comments_on_CTS.pdf	ENERGYINTEROP-679	3. There is no formal role in the Proposal for Transport Products as in TEMIX.	22/Feb/22
More complex than TEMIX	William Cox	ARCH-CONF	Edward G. Cazalet, TEMIX https://lists.oasis-open.org /archives/energyinterop- comment/202111/msg00001 /Cazalet_Comments_on_CTS.pdf	ENERGYINTEROP-691	15. The Proposal does not simplify TEMIX as claimed. Most, if not all, of the claimed benefits of the Proposal, are provided by TEMIX. The Proposal's messages are not simpler than TEMIX messages and are likely incompatible (the messages are not yet published). TEMIX, as it stands, is fully capable of providing transactive services in any market, although its documentation in EMIX and El could be "cleaned up" in a new standalone TEMIX profile of these standards. Hence the Proposal only adds confusion to the detriment of Transactive Energy progress	23/Mar/22

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Offset Time unworkable	Toby Considine	MARKET	Edward G. Cazalet, TEMIX https://lists.oasis-open.org /archives/energyinterop- comment/202111/msg00001 /Cazalet_Comments_on_CTS.pdf	ENERGYINTEROP-689	13. The Proposal's option to have markets with offset Start Times is unworkable and unnecessary.	23/Mar/22
Order and Undefined Terms	Toby Considine	editorial	Trevor Hardy, PNNL https://lists.oasis-open.org /archives/energyinterop- comment/202111 /msg00000.html	ENERGYINTEROP-676	page 18 line 307 "Delegation" is an undefined term up to this point in the document. "PartyID" is an undefined term up to this point in the document.	01/Mar/22
Party and Party Registration	Toby Considine	PREREQ	Donald Hammerstrom https://lists.oasis-open.org /archives/energyinterop- comment/202111/msg00008 /2111DJH_CTS_Review.pdf	ENERGYINTEROP-713	There are 30 specific recommendations in the "Specific Recommendations" section of the submitted Hammerstrom paper. I have numbered them all for traceability as I recombine them into specific issues. The original white paper/submission can be read in the URI under "environment" 22. Section 7: As for the prior comment, use an informative name like "Party Registration" for this interaction. I would vote to entirely eliminate word "facet" from this document as it is not defined and useful within a standardization context. 23. Section 7: The properties of a Party are not addressed, but the Party of an electricity market should specify location, I hope, if it is to support future location-specific transactions and outcomes.	23/Mar/22
PartyID Uniqueness	Toby Considine	(ARCH-CONF)	Rolando Herrero https://lists.oasis-open.org /archives/energyinterop- comment/202111 /msg00003.html	ENERGYINTEROP-693	Page: 18, Line: 307 -> How are PartyIDs assigned? Are they unique? How is uniqueness enforced?	08/Feb/22
Power vs Energy	Toby Considine	CLARITY PREREQ	Horia Pop; Lateral Inc https://lists.oasis-open.org /archives/energyinterop- comment/202112 /msg00001.html	ENERGYINTEROP-719	Power vs Energy In the initial part of the document both power and energy are referred to as acceptable values for a Resource. Given thereâs an ongoing confusion between power and energy, I believe the TC should not promote both in the standard as acceptable. To have any practical TE use energy must always be bound to a unit of time and thus a rate of delivery (power). Whether the power should be levelized or follow an acceptable curve within the interval as defined in [EMIX] thatâs beyond the scope. The resource that an actor tenders, transacts, delivers, and settles is energy. Power is just an attribute of that energy tender, contract, and delivery. [Lines 11,16,17,229]	22/Feb/22
Representing Inflexibility	William Cox	MARKET	Donald Hammerstrom https://lists.oasis-open.org	ENERGYINTEROP-702	Transactive energy systems should be able to represent both their flexibility and	23/Mar/22

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			/archives/energyinterop- comment/202111/msg00008 /2111DJH_CTS_Review.pdf		inflexibility. Failure to do so will create exceptions and will rely on assumptions—like the existence of a predetermined market position or baseline. Consider, for example, a transactive system design that must communicate not only its available flexibility, but also its existing baseline apart from such flexibility. Regrettably, the number of objects having no flexibility is typically much greater than the number offering flexibility. Also consider the growth of renewable energy resources, which contribute virtually no flexibility to be controlled by prices but are becoming an important component of global electricity supply. Figure 2 demonstrates alternative representations of inflexible supply and demand. Unlike the binary flexibility discussed in Section 1, inflexible supply or demand possess no meaningful strike price. Inflexibility implies that the quantity would be the same regardless of price. One way to extend CTS to represent inflexibility would be to populate the strike price with a value (e.g., ∞ or NULL) that would clearly indicate inflexibility. If this number or symbol is used consistently, it would be easy to identify and aggregate inflexible supply and demand See attachment (URI in environment) for graphics	
Resource Definition and Location	Toby Considine	(RES-PROD-INSTR)	Trevor Hardy, PNNL https://lists.oasis-open.org /archives/energyinterop- comment/202111 /msg00000.html	ENERGYINTEROP-671	page 15 line 228 Resource definition should include the value of the commodity also depending on the location of delivery, right?	23/Mar/22
Security & Privacy	Toby Considine	CLARITY OTHER	Horia Pop; Lateral Inc https://lists.oasis-open.org /archives/energyinterop- comment/202112 /msg00001.html	ENERGYINTEROP-735	Security and Privacy Line 916 refers to encryption of messages using a lower case "should" whilst on line 985 the same encryption of messages is referred to with RFC uppercase MAY. This may inflict contradicting/vague recommendations in terms of message encryption. I suggest you use the same term for the use of encryption. I also believe that encryption, if not an absolute requirement, should be at least referred to with the word SHOULD and RECOMMENDED as defined by RFC2119. The example on line 979 in reference to a distribution system operator does not seem to be related to either security or privacy. Line 988 is using a confusing statement	22/Feb/22

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					format. Consider rephrasing for clarity "counterparty of the market" to "market as the counterparty". [Lines 916,985,979,988]	
Sides or Signs	William Cox	(ARCH-CONF)	Donald Hammerstrom https://lists.oasis-open.org /archives/energyinterop- comment/202111/msg00008 /2111DJH_CTS_Review.pdf	ENERGYINTEROP-707	There are 30 specific recommendations in the "Specific Recommendations" section of the submitted Hammerstrom paper. I have numbered them all for traceability as I recombine them into specific issues. The original white paper/submission can be read in the URI under "environment"There are 30 specific recommendations in the "Specific Recommendations" section of the submitted Hammerstrom paper. I have numbered them all for traceability as I recombine them into specific issues. The original white paper/submission can be read in the URI under "environment" 4. Line 64: The "Side attribute" in an energy market is unneeded if signed quantities are used. How would a battery system offer to transition from being a buyer to being a seller at a given price, for example? It is potentially problematic that a baseline is being assumed but not defined for all TE implementations. 11. Section 2.2.2: The attribute Side (i.e., Buy or Sell) is unneeded if signed quantities are employed.	23/Mar/22
Support for Consensus Markets	William Cox	MARKET	Trevor Hardy, PNNL https://lists.oasis-open.org /archives/energyinterop- comment/202111 /msg00000.html	ENERGYINTEROP-672	page 15 Table 2-1 What about distributed or consensus mechanisms that do not necessarily communicate instruments among market participants? It seems like these mechanisms would not be supported by CTS, true?	23/Mar/22
Tender Payloads	Toby Considine	(RES-PROD-INSTR)	Horia Pop; Lateral Inc https://lists.oasis-open.org /archives/energyinterop- comment/202112 /msg00001.html	ENERGYINTEROP-729	Tender Facet â Payloads Definition Why is a resourceDesignator required when theÂtender already infers it? Tender implies an instrument. Instrument implies product. Product implies a market. Market implies a resource. If the intent is to identify the market, why not specify the product or market directly? Why is there a CounterPartyID in the responses for EICreatedTender and EiCanceledTender payload? [Lines 572]	08/Feb/22
Transaction States	Toby Considine	ARCH-CONF	Donald Hammerstrom https://lists.oasis-open.org /archives/energyinterop- comment/202111/msg00008 /2111DJH_CTS_Review.pdf	ENERGYINTEROP-715	There are 30 specific recommendations in the "Specific Recommendations" section of the submitted Hammerstrom paper. I have numbered them all for traceability as I recombine them into specific issues. The original white paper/submission can be read	23/Mar/22

Summary ↑	Assignee	Labels	Environment	Key	Description	Resolved
					in the URI under "environment" 24. Section 8: This section points out the weakness of using transaction and Transaction differently. I liked the use of Transaction in TEMIX as a state of a transaction. All this subtle distinction is lost if capitalization is not used consistently, as is the case in this section. 26. Table 9-2: I think the fact that an EiTransaction always has Transactive State=transaction is a vestige of an earlier, preferable approach. Wouldn't it be much more elegant to define a single transaction behavior, in which the transaction migrates through its available states? Each of the Tender Facet, Transaction Facet (and possibly Quote Facet) should be defined as state transition behaviors, but I question why the structure of the interaction payloads should differ at all. • Tender, Transaction, Delivery, (Quote) address states of an interaction and were more clearly addressed by a TEMIX enumeration. This may be an unwise simplification, as it limits future extension of interaction attributes.	
TransactionID and Data Types	Toby Considine	ARCH-CONF	Rolando Herrero https://lists.oasis-open.org /archives/energyinterop- comment/202111 /msg00003.html	ENERGYINTEROP-695	Page: 41, Line: 604 -> How is the transaction ID defined? Some of these tables like 8-2 and 9-2 should specify the data type of each attribute.	08/Feb/22
Transactions vs Contracts	Toby Considine	(ARCH-CONF) (editorial)	Horia Pop; Lateral Inc https://lists.oasis-open.org /archives/energyinterop- comment/202112 /msg00001.html	ENERGYINTEROP-724	Transactions vs Contract The standard implies a one-to-one relationship between transaction and contract. In practice, I believe it is more appropriate to have a one-to-many relationship between transactions and contracts. Each party of a transaction will receive its own distinct contract (the counterparty may not be public to each other). Also, for the market to match an integral tender, t may have to match with multiple counterparties tenders to create a transaction. [Lines 282, 318, 379]	22/Feb/22
White Paper	William Cox	OTHER	Donald Hammerstrom https://lists.oasis-open.org /archives/energyinterop- comment/202111/msg00008 /2111DJH_CTS_Review.pdf	ENERGYINTEROP-699	Detailed white paper with schematics and many comments attached. (See URI for environment, or attachment) Will attempt to transfer all as issues, but including overall white-paper as guidance.	23/Mar/22

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