

Energy Market Information Exchange Technical Committee

Minutes for Thursday, 17 December 2009, 11:00am EDT

Agenda:

1. Call to Order
2. Roll Call
3. Approve Minutes 2009-12-03
4. Approve Minutes
5. Action Items
6. Priority Action Plan 3 Update from Grid-Interop
7. Block prices evaluation and placement -- questions and issues (Toby, Bill)
8. Adjourn

Attendees: Member / Company (* = voting)

Edward Cazalet*	The Cazalet Group
Toby Considine*	University of North Carolina at Chapel Hill
William Cox*	Cox Software Architects LLC
Girish Ghatikar*	Lawrence Berkeley National Laboratory
Anne Hendry*	Individual
David Holmberg*	NIST
Michel Kohanim	Universal Devices, Inc.
Perry Krol*	TIBCO Software Inc.
Alex Levinson*	Lockheed Martin
Scott Neumann*	Utility Integration Solutions Inc.
Carl Reed*	Open Geospatial Consortium, Inc. (OGC)
Pornsak Songkakul*	Siemens AG
David Sun*	Alstom Power Inc.

Minutes:

1. Call to Order

Ed C: Call to order.

2. Roll Call

Anne H: Roll Call

Meeting achieved quorum.

Voting Members: 12 of 13 **(92%)**

Individual Attendance Members: 13 of 43 **(30%)**

3. Approve Minutes

The 2009-12-10 meeting did not achieve quorum so no official minutes were written, although meeting notes may be posted just for info.

Approve Minutes 2009-12-03 Ed called for approval; Bill seconded; Minutes approved.

4. Subcommittee Status (Ed Cazalet)

We have met once, put together examples of existing prices to include financial transactions, system operators, retail. Scheduled to meet this week, but nothing to report today; will report at next meeting.

See example of an increasing block tariff currently in use by PGE:

<http://www.oasis-open.org/committees/download.php/35656/Examples%20of%20Increasing%20Block%20Rates%20for%20PG%26amp%3BE.docx>

5. Other energy prices including natural gas (Toby Considine)

No discussion.

6. Evaluation of Characteristics for EMIX (Bill Cox)

Slides at <http://www.pointview.com/data/2009/11/32/pdf/David-Holmberg-5071.pdf>

Slide 2 Origin of content

Bill C:

This is a compilation of key characteristics in both price and product that been discussed earlier -- in my presentation in November, in David Sun and Ali Ipakchi's presentation in October, and from various meeting minutes.

Slides 3, 4, 5 Characteristics Discussed

Bill C.:

Have discussed Price, Currency, Units of Measure, Quantity, Counter Party, Kind of Energy, Schedule, and Location.

Also description of Source, Carbon characteristics, and Specialize Electrical characteristics (eg. reserve, frequency, voltage, capacity).

Also have Green Content percentage and Usage/Load (NIST PAP10 intends to provide interoperability use info).

This list is not prioritized, just a list of items that have been raised to date for consideration.

Scott N.:

On location, could be a specific geo, or hierarchy, or electrical hierarchy (load zone, feeder, etc).

Ed C.:

Important to indicate if this is buy or sell price, because there are bid/ask differences. Also, all these markets, whether iso or forward, are contracts made at different times for the same schedule intervals. Price will differ based on contract vs. delivery interval; ex. day ahead, real time, hour ahead, month ahead, ... Two different concepts of time.

Bill C.:

Also wholesale/retail/aggregator distinctions mentioned.

David H.:

Thinking about transactions where the customer wants to represent location. Might be cases where the customer location matters and we have source description, but how to represent what customer wants to buy -- how is that communicated?

Carl R.:

In OGC use UCUM (<http://unitsofmeasure.org/>) and unitsML (<http://unitsml.nist.gov/>).

David S.:

Back to David H.'s comment on location, have a source descriptor, but on seller side if seller/buyer treated equally, then need to identify meter location and seller location so we know how to deal /w it.

Scott N.:

Want to know geography and price; when look at time, market has type of market and time frame, when energy is traded vs. when it's delivered. As well as type of market (ancillary, wholesale, etc)

Bill C.:

OK, so can add Trade time, delivery, type of market (retail, ancillary, wholesale).

Rish G.:

For time sync in these different markets do we have standardized time formats, protocols? If sending by/sell prices, also have to send times.

Toby C.: This is a requirement from NAESB to ws-calendar, so already being taken care of.

Bill C.:

Many protocols for time synchronization; we're planning on using output of ws-calendar (icalendar w/ more semantics) implies synchronization of timezones and more. We have no place defining synchronization – it's outside our scope.

Ed C.:

Also imp to distinguish between price indices, price offers, and actual contracted prices eg. many will use price indices (closing, hour ahead) as element in a contract, even though you can't buy and sell at that price because the market is closed.

Bill C.:

Good point; will address this in future; want to bring out issues, this is important.

Slide 6 Extensible

Bill C.:

Might need name/value pair but someone needs to manage names and value sets for base for specific energy characteristics and extensions; namespace management issue -- don't want to have mutually incompatible extensions, so for practical and long-term use, needs to be some management of extension namespaces.

Slide 7 Proposal

Bill C.:

Ideas on how to approach this:

- structure with key info on info model itself (things we are sure are broadly needed)
- additional info (see ex.) as other message components or other artifacts

Slide 8 Proposal – Information Model

Bill C.:

Need level of discourse to say 'here's what's needed' and then focus on each individually. Pretty clear what are base characteristics: price, currency, units of measure, quantity, schedule, location, source (electric, gas, regulation, voltage, balancing power, etc). Anything else in central model?

Slide 9 Proposal – Extended Characteristics

Bill C.: Carbon, Source Percentage, Green content, Usage/Load/Peek

- Carbon subject to great deal of discussion -- what do carbon characteristics mean? Relevant in some markets but not a core characteristic, may be related to quantity or cost or markets (may be markets for carbon production) but at this level of detail, can't productively determined -- will note
- Source percentage: if here's a 5MW hydro contract. ISOs tend to file info off and tell you 'blended product is ...', so perhaps blended is considered; others like to provide percentages
- Green content – definition: wind and solar (excludes hydro); will have relationship to source.
- Usage, Total load, or Peak? May need to be informed by interchangeable peak info ...

Slide 10 – Not in the Model (but carried with EMIX artifacts)

Toby C.:

Counterparty is a proxy for something else and can go both ways; if I had a pile of EMIX's and quantities should be able to add these up on ledgers, allowing clearing markets and differing products over the same lines, but can't do this unless it's tied to the batch/lot so must always know lot id of products so they can identify source; not counterparty, but perhaps source id, blending id, ... something. Might start with the generator (if my particular source blended), creates a new lot ID, but trackable blend, may go through intermediary into my house. The lot ID may change, but flows through and this may go through intermediary to my house. So lot id may be different as it goes through intermediaries.

Toby C.:

Remember Mike Oldak's statement that these are all "terms and conditions". During August meeting where PAPs came together (smartgrid-nist prelim process where came up with pap plans) at the meeting describing what EMIX was going to be Mike described it as reliability, contract terms and assertions (how reliable, mix, etc). Lot id may be part of that.

Ed C.:

Somewhat along the same lines as Toby's. We have your base proposal and in there it's "Source". Think of M.Oldak, general view is that electricity is electricity. Location and time are key attributes. But ignore source attributes its a highly liquid commodity, no one can distinguish a green from a brown electron when it's in your toaster. So perhaps source should go in extended characteristics -- may be terms and conditions that express, carbon, and more. If want a minimal description of energy pricing for commercial transactions then source would not be a key variable.

Toby C.:

Curtailed is negative consumption.

Ed C.: Perhaps source should go in extended - may be terms and conditions that express, carbon, and more. Want minimal for energy transactions, source would not be a key variable.

Bill C.: We'll be having vibrant discussions on the subject; source is a primary determinant; blends are a one-off. Sources need to be extensible (solar space energy and tight-beam).

Toby C.:

In same way that differentiation of source (using Toby's tomato example) has created separate markets for different types of tomatoes, by same token, having a way of specifically directing purchases/sales to or away from particular sources, discourages or encourages use of various sources. Need more discussion. To my mind source is the first order/ practical consideration -- list of sources needs to be extensible. Solar panels in orbit with narrow cast power, so maybe space power will be other differentiating thing.

Anne H.: Look at Financial Market to see how that has evolved, in green sources of equity -- same thing, not exactly part of the base/description – value of green investment \$\$ is not tied to how its generated, but is primarily a characteristic of investment approach. Green investments yield dollars, green power yields energy. Not intrinsically core to the product.

Slide 11: Next Steps

Bill C.:

Write up info model; work on definitions of pieces; process for making changes. Need to move this from brainstorming to written proposal

Toby C.:

Next phase, as an approach, are you doing rough draft of external schema docs, or rough drafts of what's in the standards and artifacts later?

Bill C.: Narrative first, narrative to spur and focus conversation. Top down. Modeling this early is counter-productive

7. Adjourn

Toby C.: Move to adjourn. Bill C: Objections? None. Ed C.: Adjourned 12:02 ET

Next meeting January 7, 2010