

What we have in EMIX is a few layers. A family of ways to contract: discrete purchases, option contracts (with associated performance terms). We have a layer of pricing options: price negotiations, price taking (w/ or w/o tiers) and a few odd-balls And then we have the low-level mangoes being bought and sold.

It appears that we can eliminate the odd-balls by creating a rough taxonomy of mangoes as follows.

Mango Taxonomy	Yellow	Red	Green
Energy	Product	Product	Product
Power	Product	Product	Product

If we can fill in the blanks, fully characterize the mangoes, then, I think we can eliminate the odd-balls and complete the power/resource side in EMIX. This suggestion aligns with Dr. Burns suggestions that we expand on the Reading Types as described in the NAESB PAP10 process.

If understand the many helpful suggestions, we have so far focused on Yellow

Yellow	Real / Inductive / or just [power / energy]
Red	Voltvar, voltamps, Q, reactive [power/energy]
Green	Total / Complex [power/energy]

I am trying to fill out the product descriptions. I have recently sent out several requests about the Red column

Mango Taxonomy	Yellow	Red	Green
Energy	Volts	Product	Product
Power	Watts, Joules/second	Product	Product

Dr Snyder has recently sent me some encouraging, but not fully actionable (to me) suggestions, Both Marty AND Aaron have suggested that I take the scalar descriptors and abstract them elsewhere.

<ol style="list-style-type: none"> <li>1. <b>xs:complexType name="RealPowerUnitsType"</b>; why do we have to build a list here? Real power (P) has a base unit of Watts (W) or Joules/sec and a prefix multiplier (e.g., kilo/k, mega/M, giga/G, milli/m, etc.) Can this be simplified even further and get rid of the list? Same for Joules/sec.</li> <li>2. <b>xs:complexType name="ReactiveEnergyUnitsType"</b>; same comment as #1. Base unit is var-hours (VARh is one abbreviation), then a multiplier.</li> <li>3. <b>xs:simpleType name="VoltageUnitsType"</b>; I don't understand the restriction for this type to V, kV, and MV; if they are kept, it is worth determining if kV or KV is more common (or pick the one from IEC CIM).</li> <li>4. <b>xs:simpleType name="VarUnitsType"</b>; ditto #3</li> <li>5. total/complex power unit: volt-ampere, VA</li> <li>6. real power unit: Watt, W</li> <li>7. reactive power unit: volt-ampere reactive, VAR</li> <li>8. total/complex energy unit: volt-ampere hour, Vah</li> <li>9. real energy unit: Watt-hour, Wh</li> <li>10. reactive energy unit: volt-ampere reactive hour, VARh</li> </ol>	<p>Few resources can directly change their voltage (PV inverters <i>perhaps</i> being one of that small set), rather, they change their real and reactive power demands in all four quadrants which is then reflected in a voltage change as measured.</p> <p>The physics say as I have more inductive (and real) load, my voltage lowers. If I add capacitors, the reactive power needs from the network to meet my inductive load lessen and the voltage raises. For stability purposes, I think of nodes as either voltage-angle (V-theta) or real-reactive nodes (P-Q). either type allows me to derive the calculations for the other electrical properties (voltage, current, angle, real power, reactive power, complex power).</p>
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Can we take this and turn this into something similar to 6 mangoes, each with

Quantity

Scale

Enumerated Unit-types

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