A curious mind wants to know the answer to this mystery one way or another. I'll either figure it out myself, or else I'll get the answer from somebody else.

Is the energy of an atomic or a molecular bond real power when it is released upon its breakage versus reactive power when it is borrowed as during its use within a live circuit?

Fusion or fission, E = mc^2. These are atomic bombs or nuclear reactors.

I thought that my choice of words was clear in that I was focusing this question on non-nuclear bonds. I guess I failed. Thanks.

Use the words valance electrons.

OK, thanks, …

Is the energy of the valence electrons of an atomic or a molecular bond available as real power when it is broken versus reactive power when it is borrowed as during its use within a live circuit?

Ohh, You aren't going to get me there. This is a very complicated subject. More so than it needs to be. Throw it out there and see if anybody has a simple laymens answer. I don't. But somebody might. The answer is, the valance electronns are what are transfering the power. Period.

"… the valance electronns are what are transfering the power."

Well of course they are under normal circumstances when they are forced to, as in the case of: forcing voltage through a circuit of various components to power a load plus power all of its losses by assuming conservation of energy. This is a tremendous amount of force being applied which forces the suppression of an overreactive condition that would have inaugurated a circuit into becoming its own generator if there was no exit strategy allocated for current to form.

So, under two simultaneous conditions of starvation (but not complete starvation; more similar to a tease rather than a full banquet) provided as the input and disallowing an exit for current to form as the result of the inlet of a source of voltage, current will have no choice but to exit the same way it came in causing it to invert it's phase relative to the phase of voltage it is associated with by 1/2 cycle of displacement fulfilling the passive sign convention definition of the generation of power.

What I have seen happen under simulation is that this situation escalates at an exponential rate. It does not remain stable. Thus, it fulfills the conventional definition of instability in which the reactive power quantifying this reactance must either increase or decrease but not remain the same unlike energy which must be conserved and thus remain the same making these two types of energy — the reactive and the real — diametrically opposite in their behavior.

That's all very well and good theory, but where does it come from in physicality? That is what I'm trying to dig into no matter how difficult a topic it may appear to be, I have to pursue it relentlessly,

because there is no other rational explanation for where this phenomenon is sourcing its exponential drive toward infinite oblivion if it does not pursue its alternative of a comatose condition.

My guess is that this process is borrowing the valence electron volts just like voltage can be borrowed from a battery without spending it using various techniques of blockage.

And I'm trying to motivate someone, anyone, to get involved with this pursuit of a curiosity I do not know how else to quench.