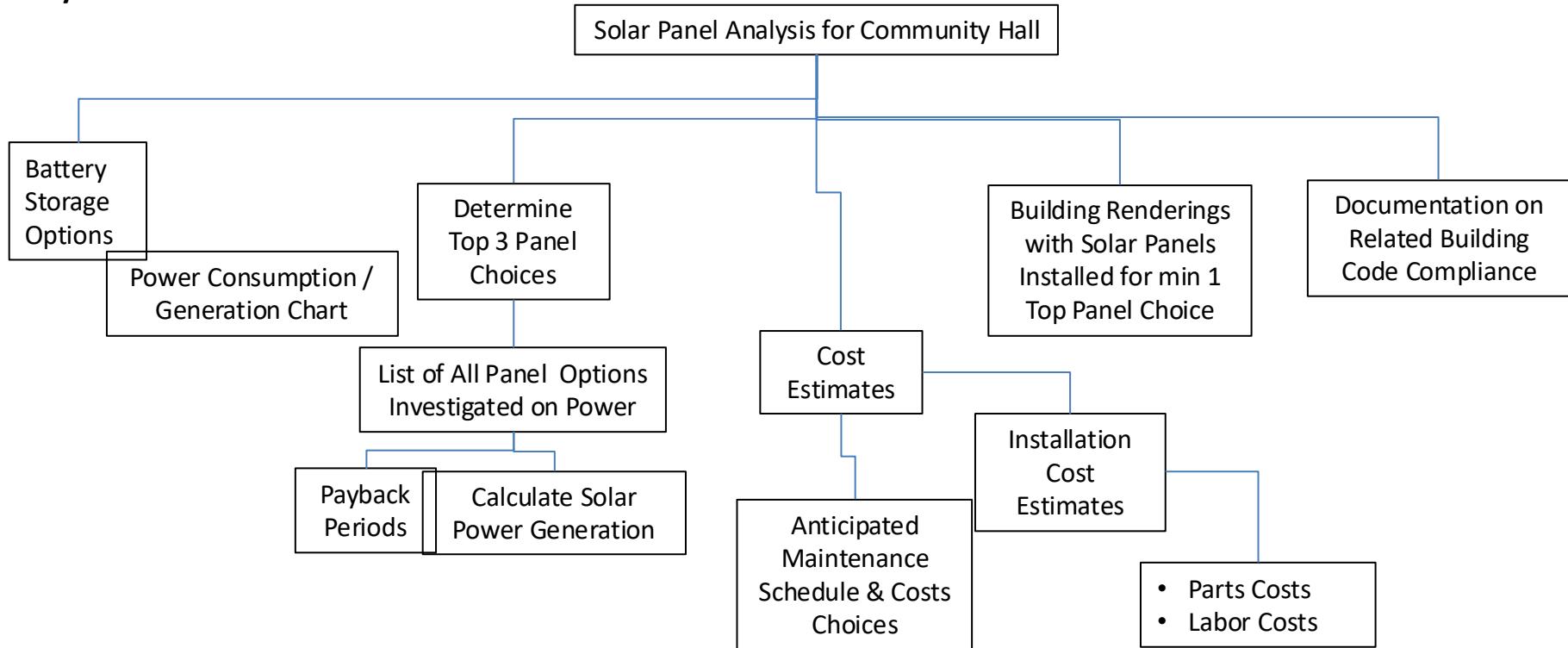


Analysis

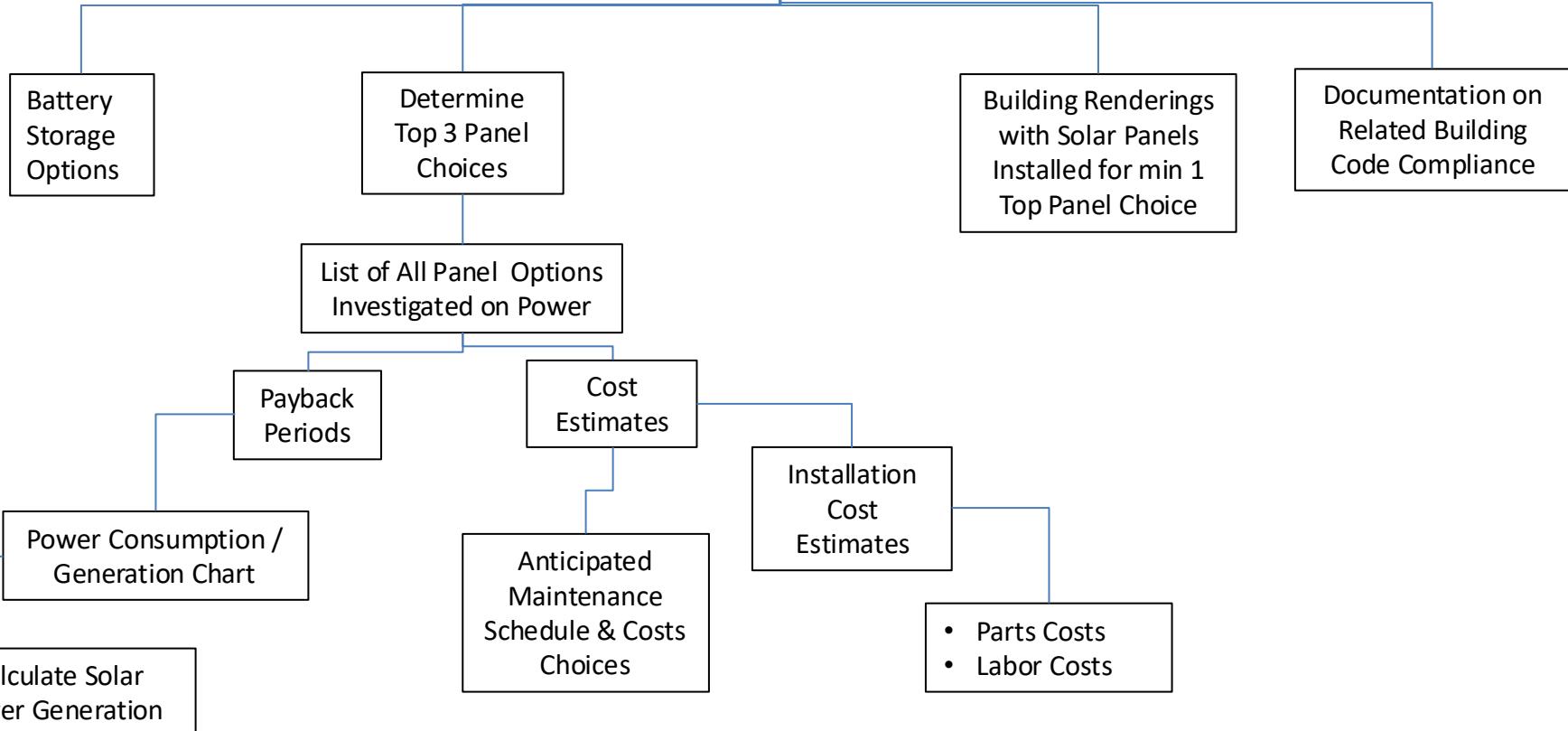


This is a first pass at the deliverables that need to be completed in order to satisfy the “analysis”. Some are broken down further. Some aren’t even connected in yet. It is clear already though that some structure is beginning to take shape but that most, if not all, of these will have to be explored further.

Notice that boxes aren’t placed precisely. They’re most likely going to be added to / moved around later anyways.

Analysis

Solar Panel Analysis for Community Hall

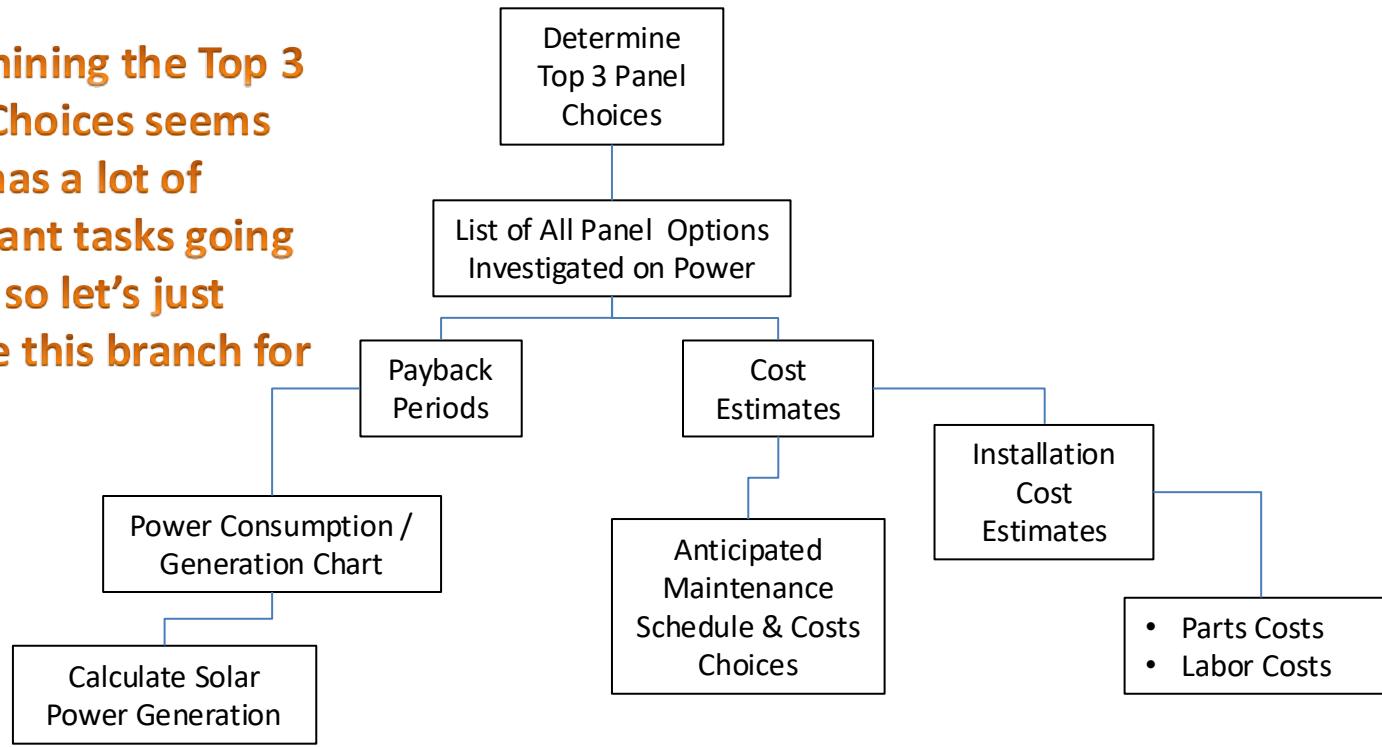


Just a little bit of organization. We noticed that we're going to need as part of the list of panels, cost estimates for most, if not all, all of panel types we investigate (unless maybe a panel type is really bad in some other way and its cost isn't worth looking into.) So we moved the cost estimates and moved under the list.

We may find we want to move it again later and that's certainly okay. This is still a very rough, just get the ideas down on paper, level of work.

Analysis.3Panels

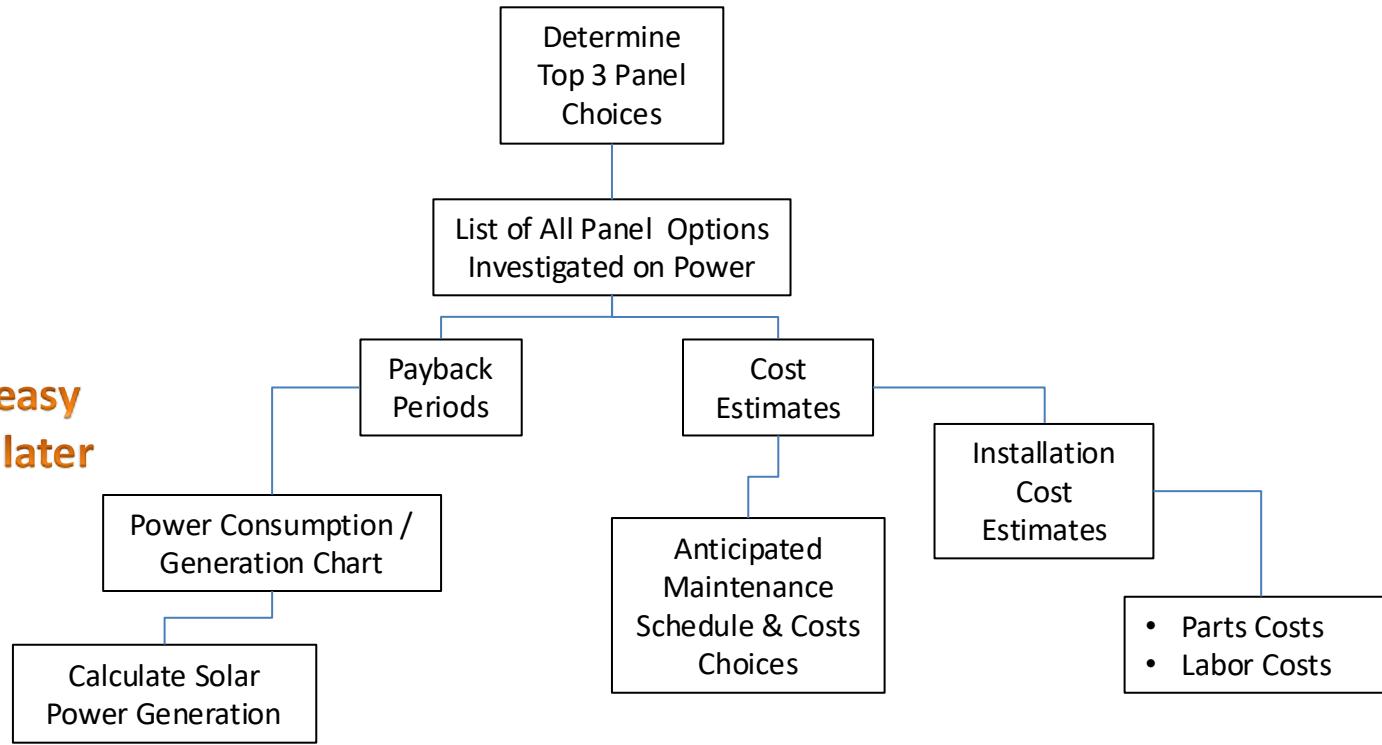
Determining the Top 3 Panel Choices seems like it has a lot of important tasks going into it, so let's just explore this branch for a bit



Analysis.3Panels

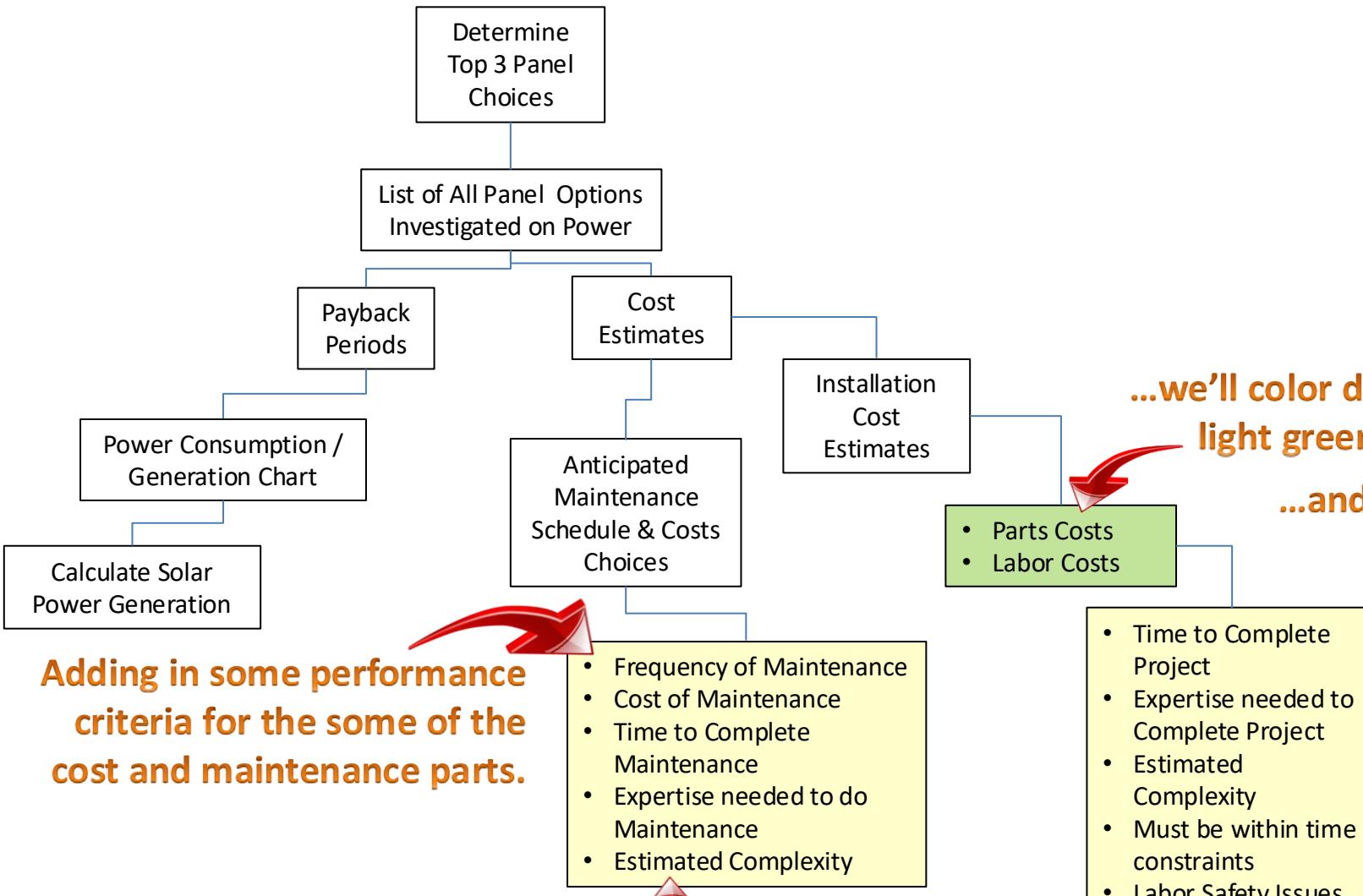


Notice the
branch is
labeled for easy
referencing later
on



You can give it any name
you want. It's just best to
make sure it has a clear and
unique meaning.

Analysis.3Panels



...we'll color data light green....

...and leave the rest white for now

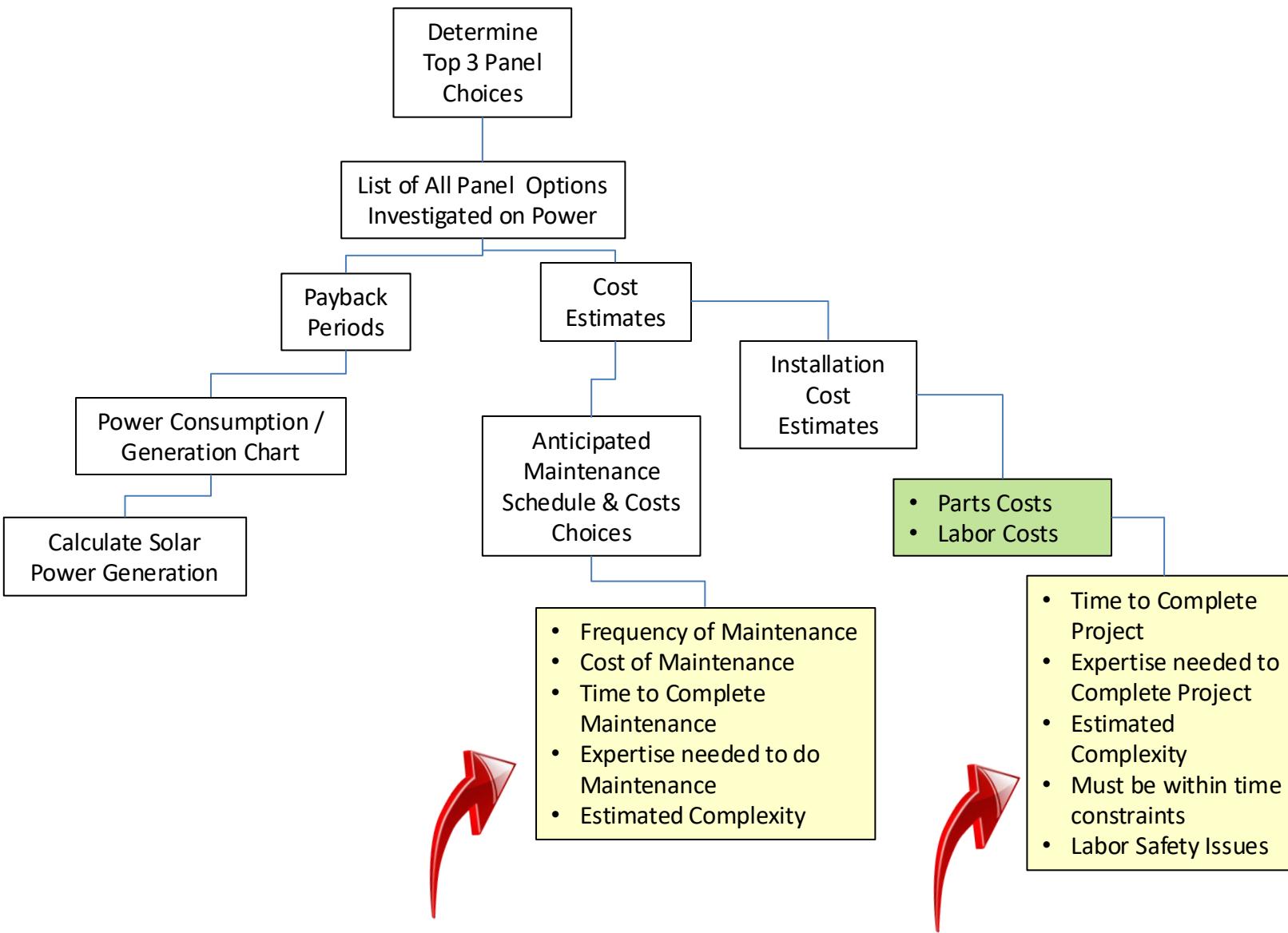
Adding in some performance criteria for the some of the cost and maintenance parts.

Normally, you might not color anything until the end because it's easier to keep track of what's what if you've written it.

For this example...

...we'll color performance criteria light yellow and...

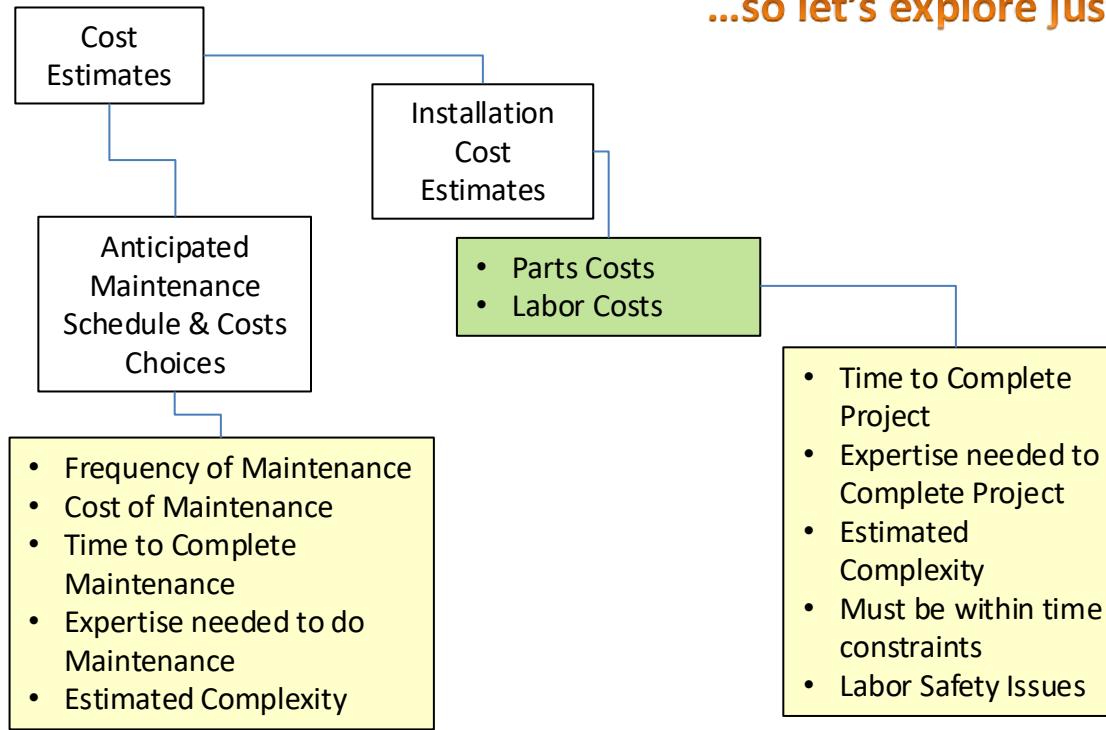
Analysis.3Panels



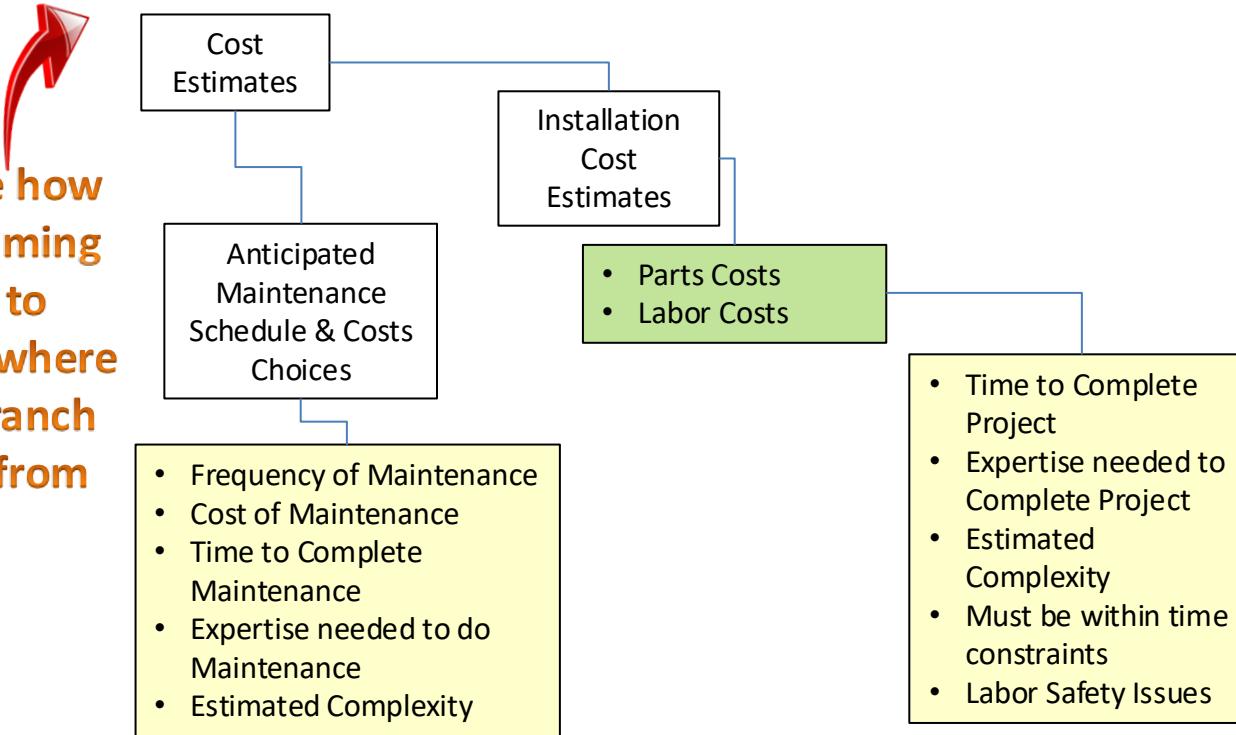
The newly added performance criteria for the some of the cost and maintenance parts, makes it clear that there's going to be a lot more to do here...

Analysis.3Panels.CostEst

...so let's explore just this cost branch

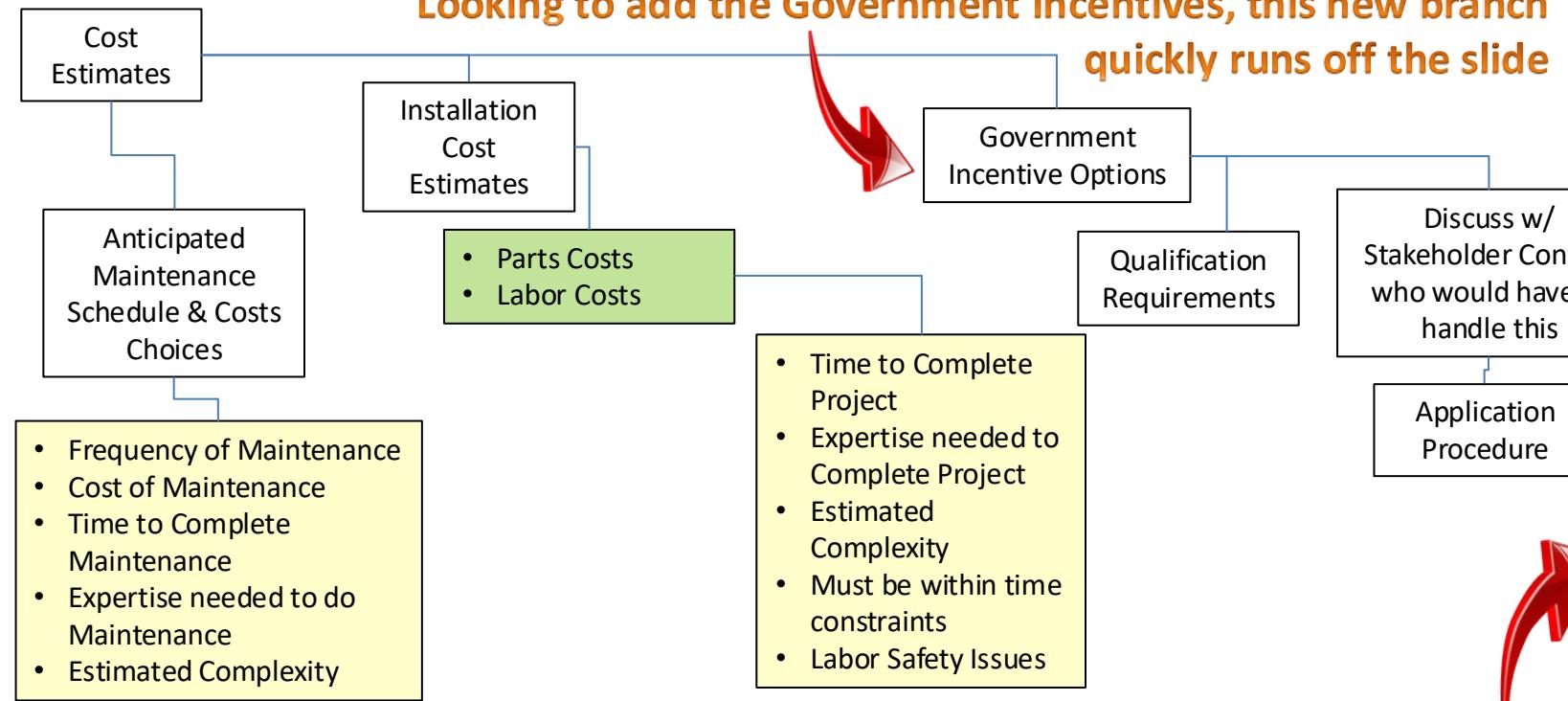


Analysis.3Panels.CostEst



The following slides share some thoughts on how this branch is grown further...

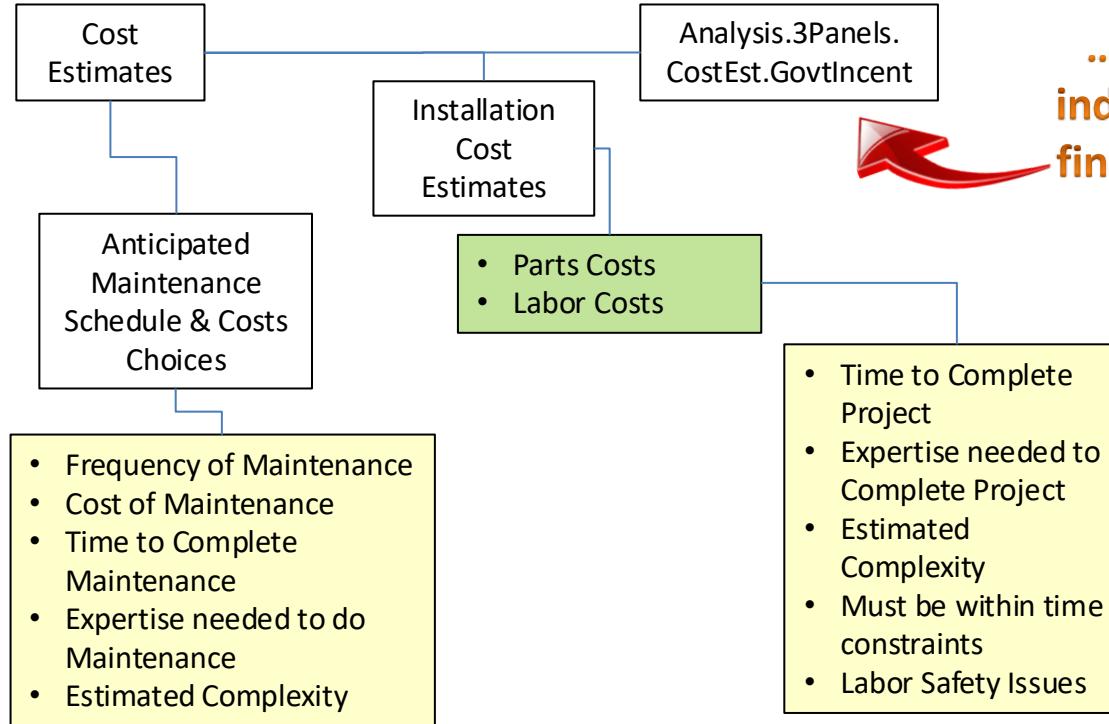
Analysis.3Panels.CostEst



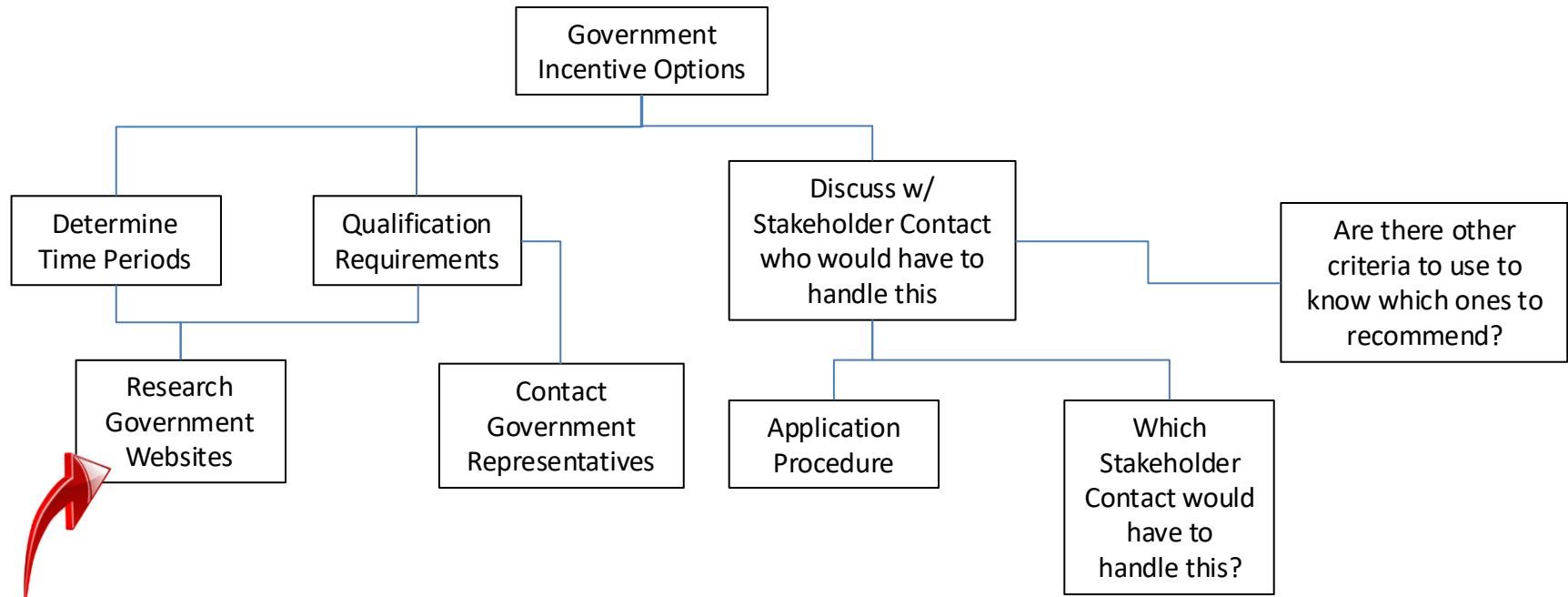
Looking to add the Government Incentives, this new branch quickly runs off the slide

That's not uncommon while you're in the middle of working on this...

Analysis.3Panels.CostEst



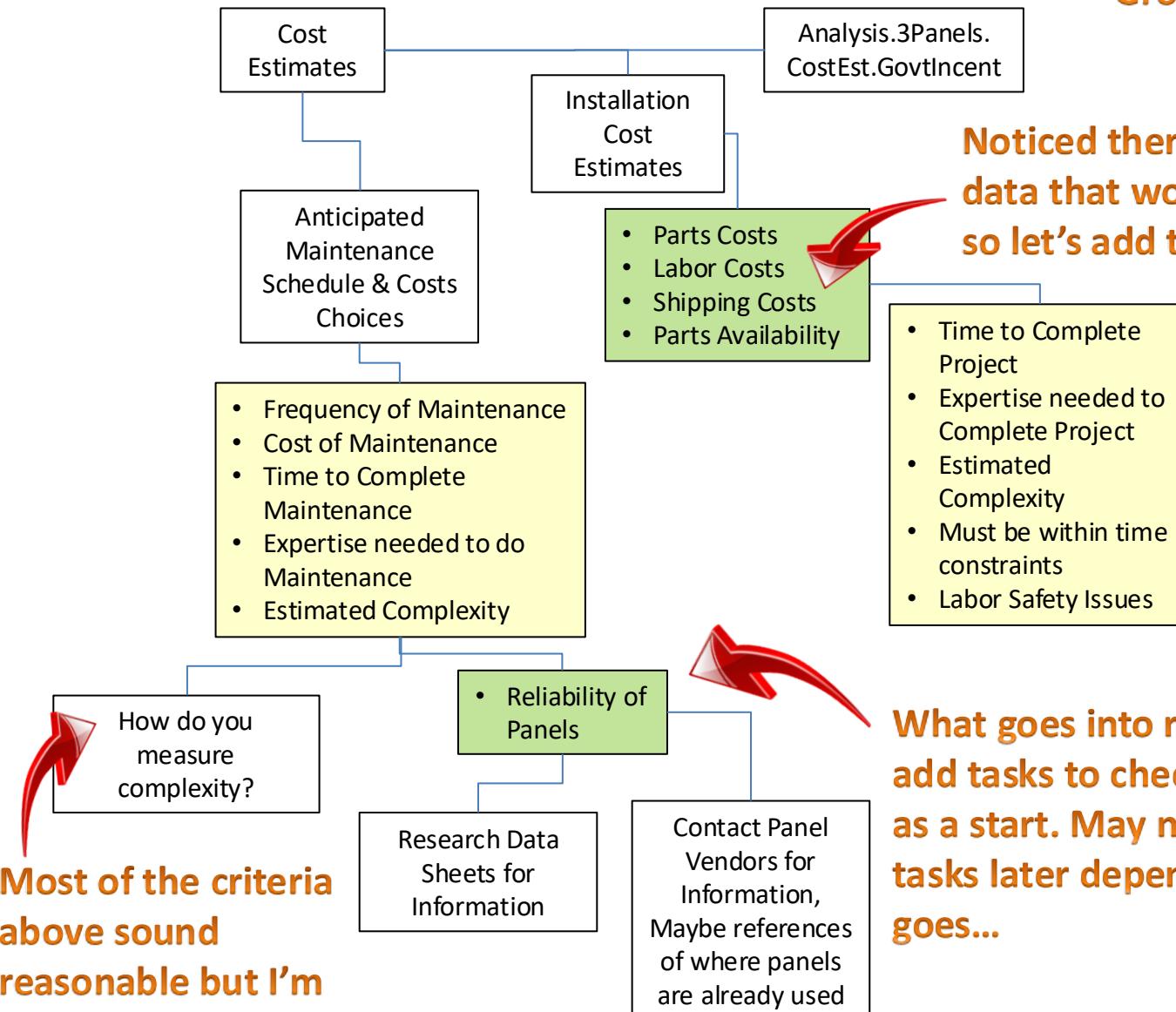
...so just cut it off and indicate where you can find it using the branch labels



Whether to repeat this node for each higher-up-the-branch-node, or connect this node to both higher-up-the-branch-nodes, as is done here, depends on the situation. Most of the time you'll want to repeat the node, but here we believe that both higher-up-the-branch-nodes' needs can be easily met at the same time while addressing this node so its okay we didn't repeat this node.

Said another way, the person who does the "Research Government Websites" task can meet both the "Determine Time Periods" and "Qualification Needs" at the same time more easily than if you asked two people to address "Determine Time Periods" and "Qualification Needs" separately.

Now back to the main Cost Estimates branch...



Noticed there was more data that would be needed, so let's add that in

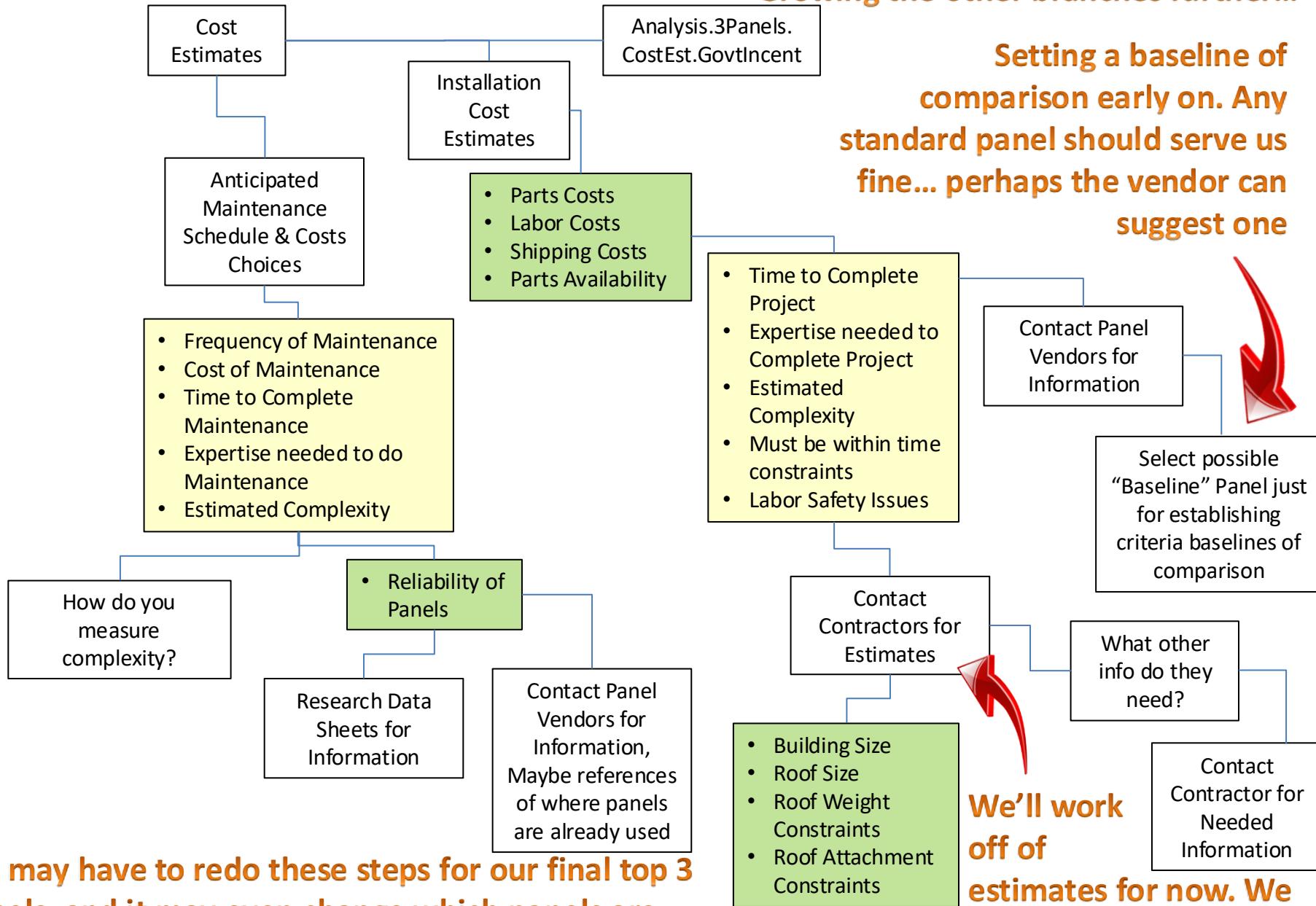
- Time to Complete Project
- Expertise needed to Complete Project
- Estimated Complexity
- Must be within time constraints
- Labor Safety Issues

What goes into reliability? Let's add tasks to check these sources as a start. May need to add more tasks later depending how this goes...

Most of the criteria above sound reasonable but I'm not sure what the stakeholder means by complexity... We're going to have to find out

Analysis.3Panels.CostEst

Growing the other branches further...

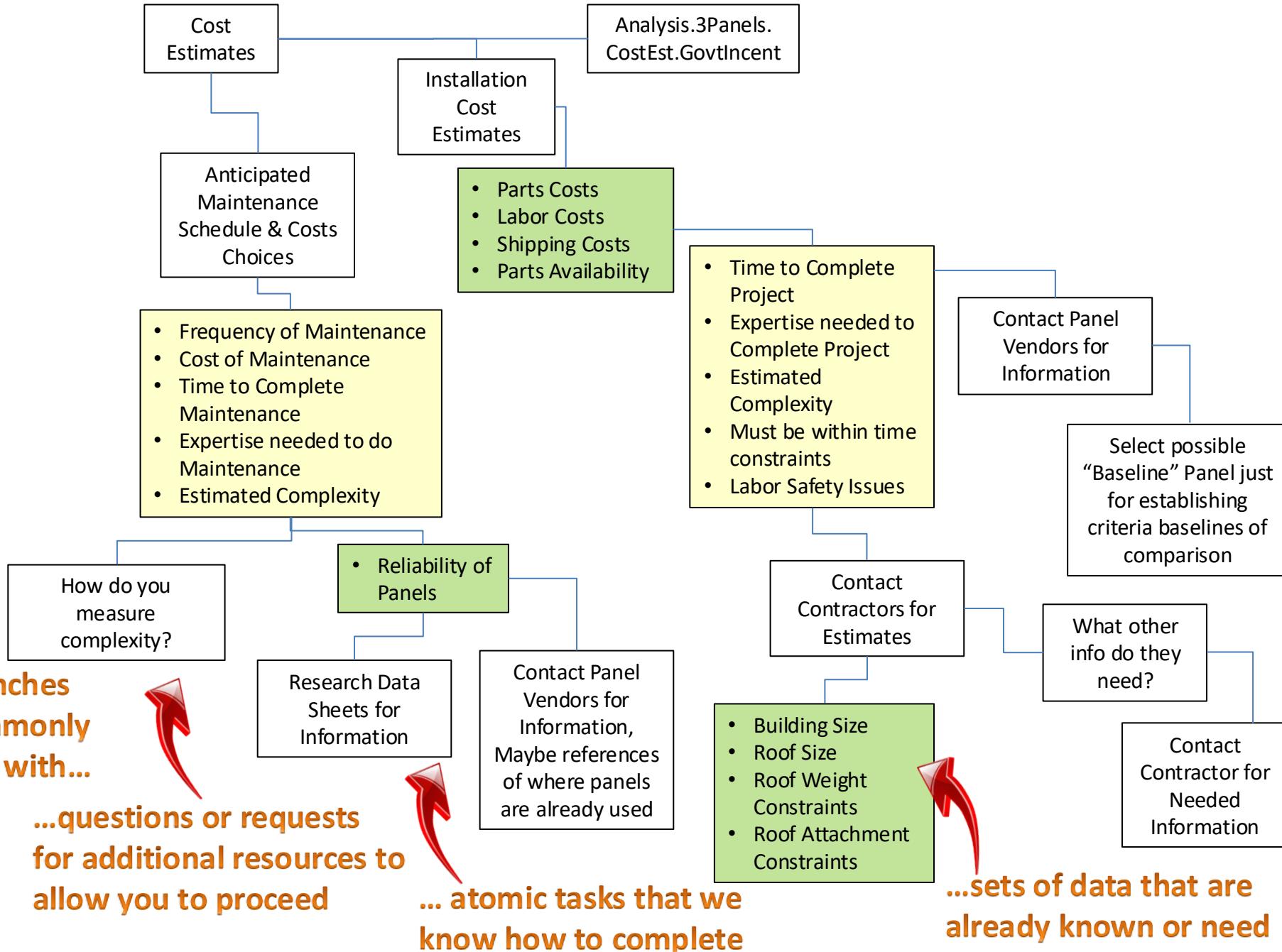


We may have to redo these steps for our final top 3 panels, and it may even change which panels are our top 3, which is fine.

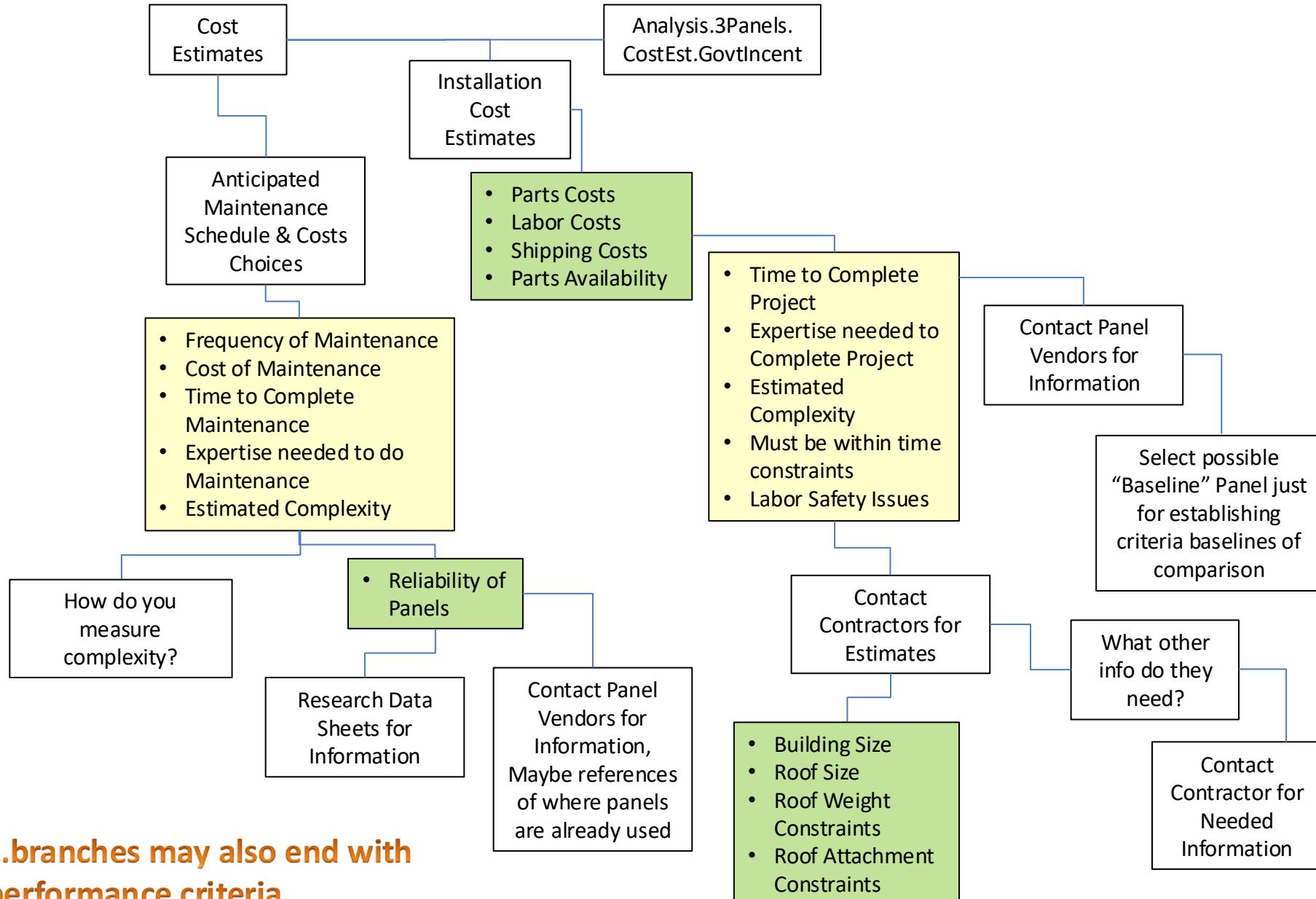
We'll work off of estimates for now. We just need a ballpark figure and this will help us build intuition.

Setting a baseline of comparison early on. Any standard panel should serve us fine... perhaps the vendor can suggest one

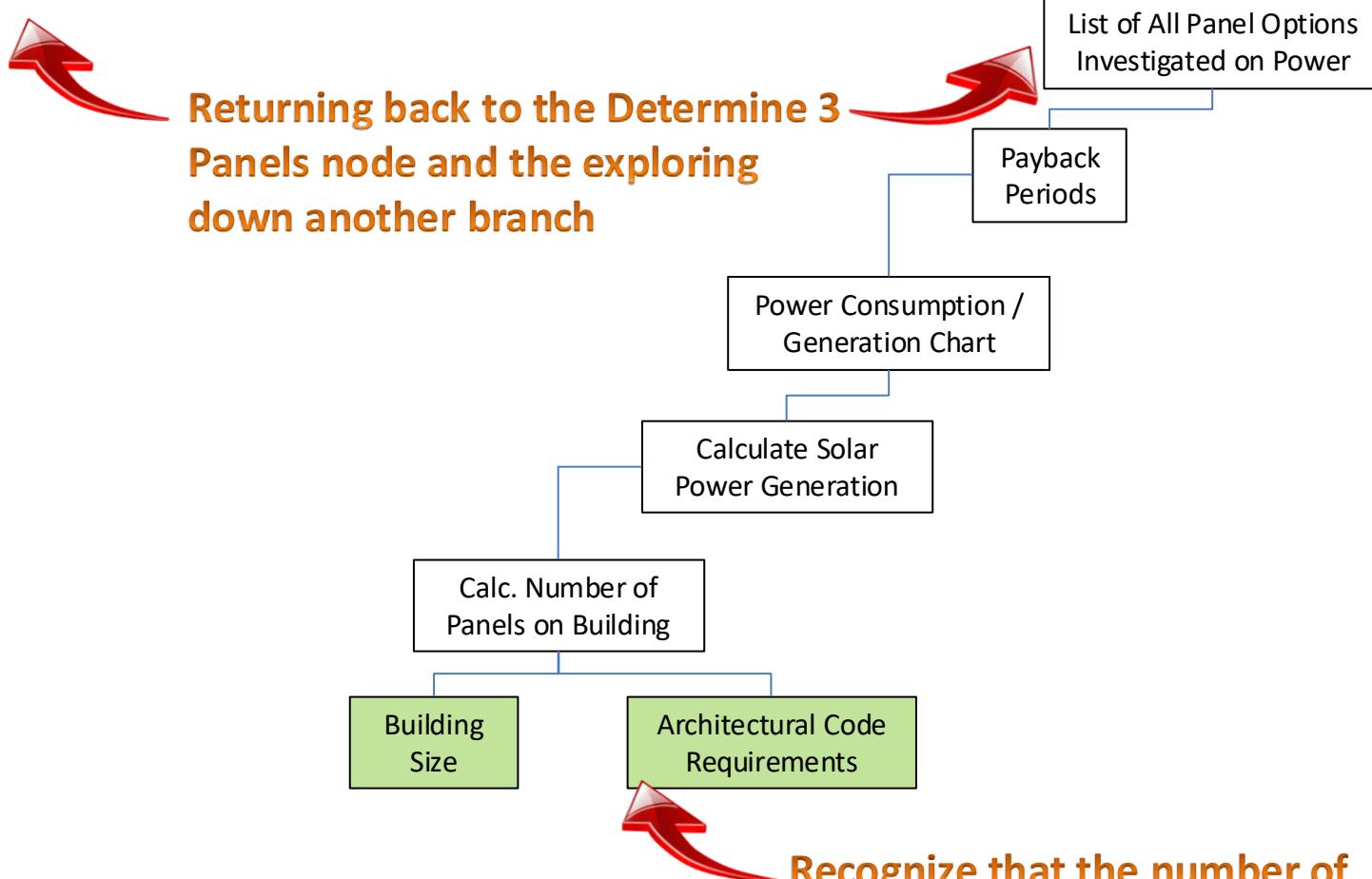
Analysis.3Panels.CostEst



Analysis.3Panels.CostEst



**...branches may also end with performance criteria.
(This case is not shown here.)**



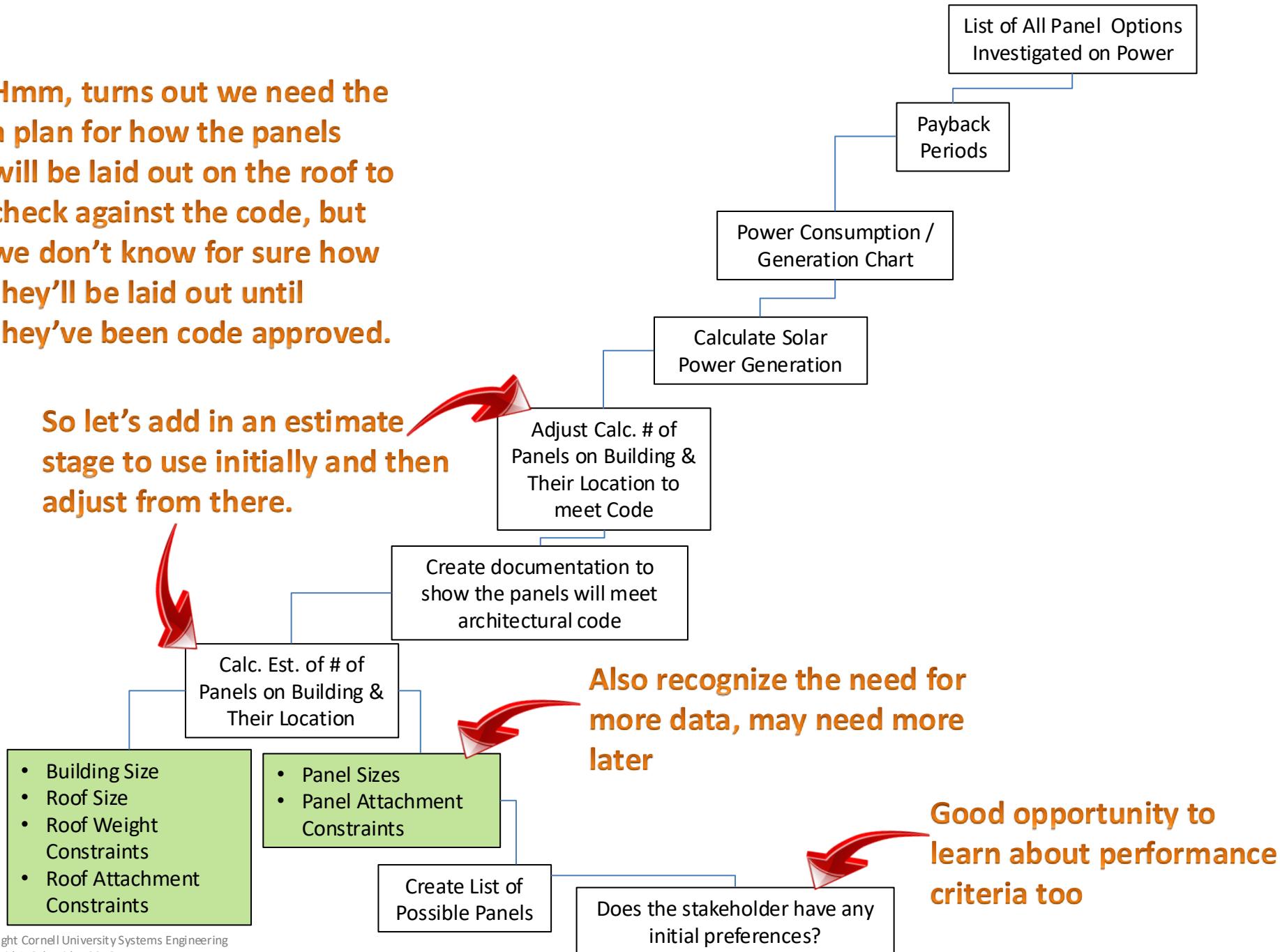
Returning back to the Determine 3 Panels node and the exploring down another branch

Recognize that the number of panels is probably going to be dependent on what the architectural code allows, so this will need to be flushed out more...

Analysis.3Panels.PanelList

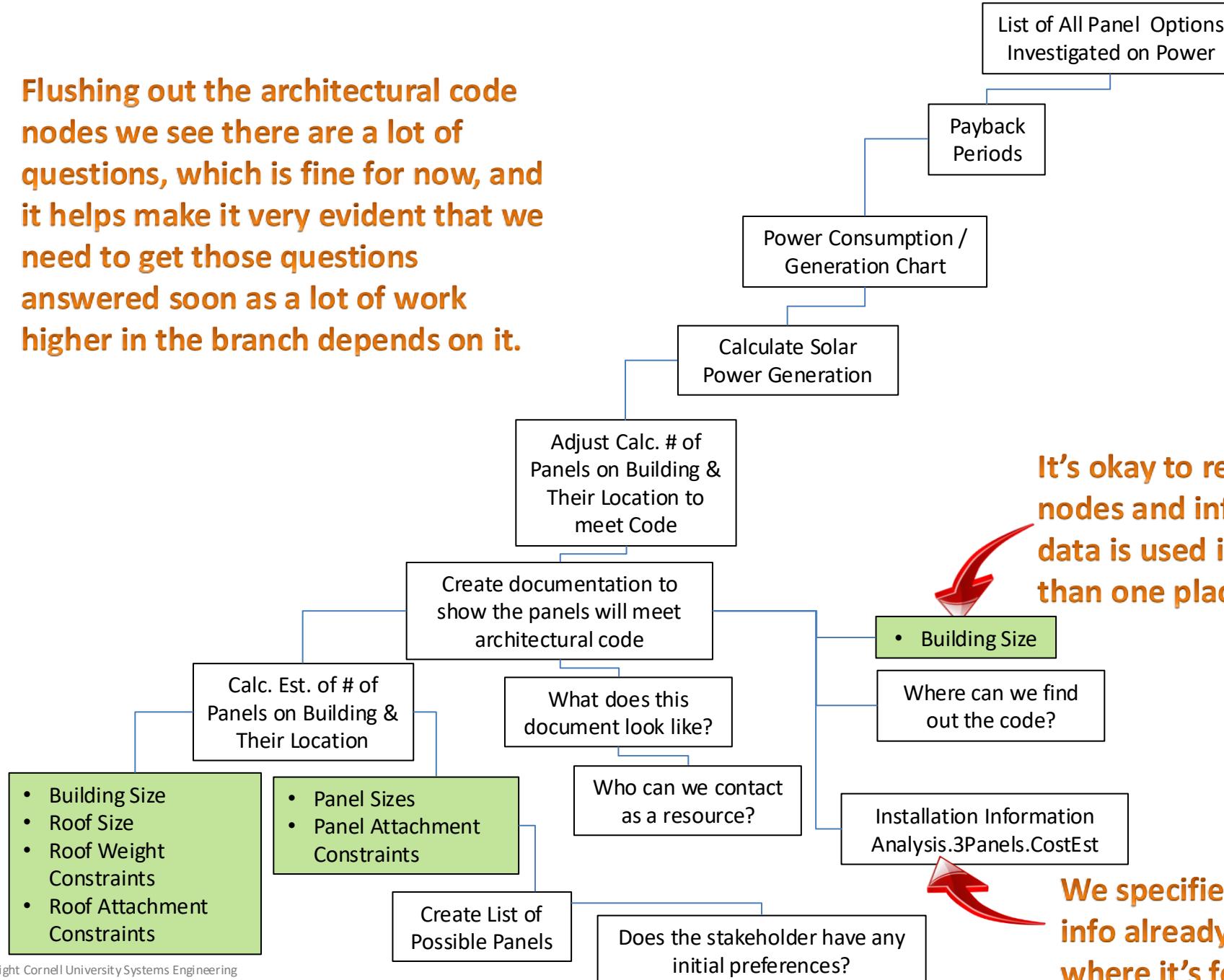
Hmm, turns out we need the a plan for how the panels will be laid out on the roof to check against the code, but we don't know for sure how they'll be laid out until they've been code approved.

So let's add in an estimate stage to use initially and then adjust from there.



Analysis.3Panels.PanelList

Flushing out the architectural code nodes we see there are a lot of questions, which is fine for now, and it helps make it very evident that we need to get those questions answered soon as a lot of work higher in the branch depends on it.



List of All Panel Options Investigated on Power

Payback Periods

Power Consumption / Generation Chart

Calculate Solar Power Generation

Adjust Calc. # of Panels on Building & Their Location to meet Code

Create documentation to show the panels will meet architectural code

What does this document look like?

Who can we contact as a resource?

• Building Size

Where can we find out the code?

Installation Information Analysis.3Panels.CostEst

Does the stakeholder have any initial preferences?

- Building Size
- Roof Size
- Roof Weight Constraints
- Roof Attachment Constraints

- Panel Sizes
- Panel Attachment Constraints

Create List of Possible Panels

Panel Sizes

Panel Attachment Constraints

Building Size

Roof Size

Roof Weight Constraints

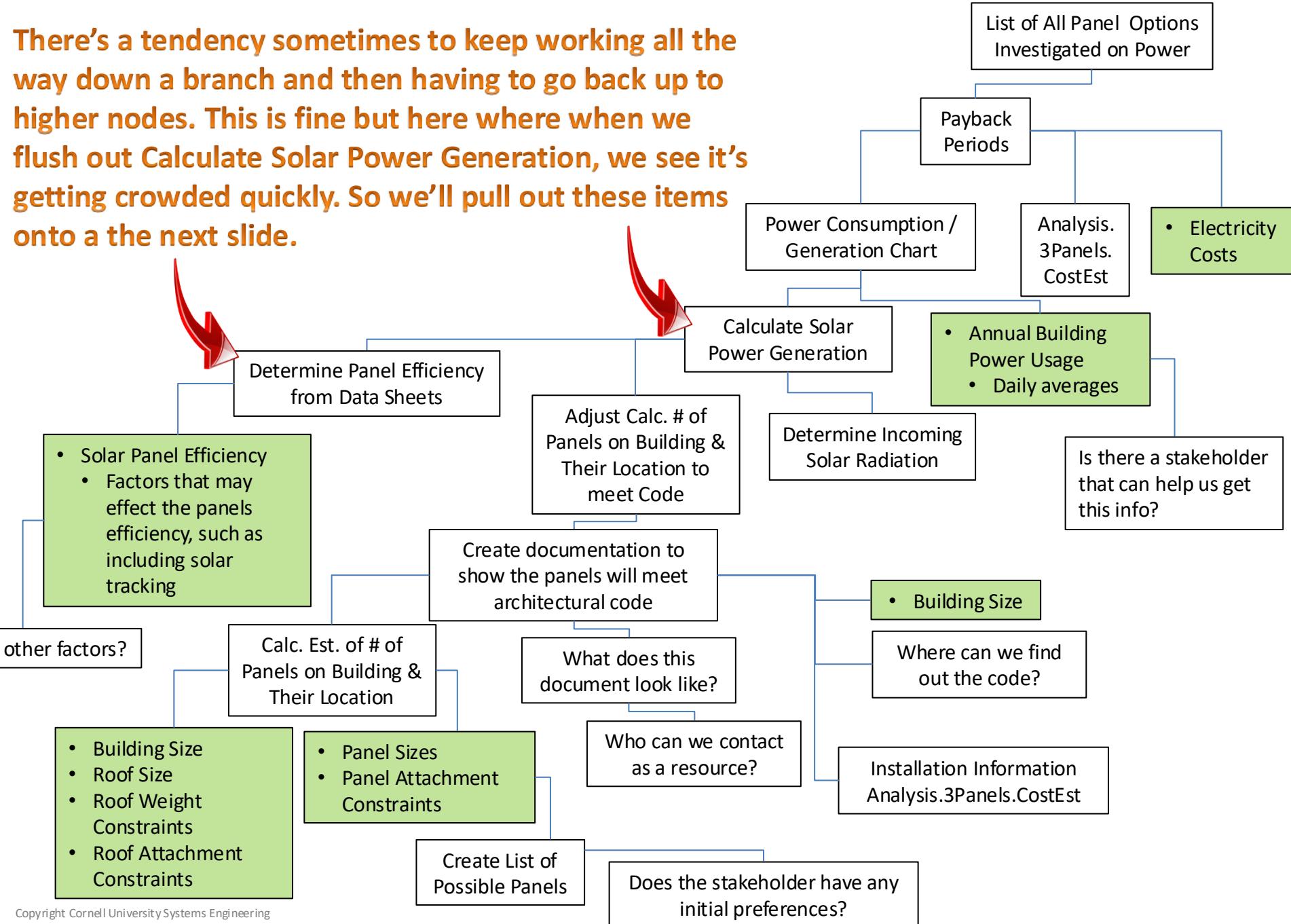
Roof Attachment Constraints

It's okay to repeat nodes and info, (this data is used in more than one place)

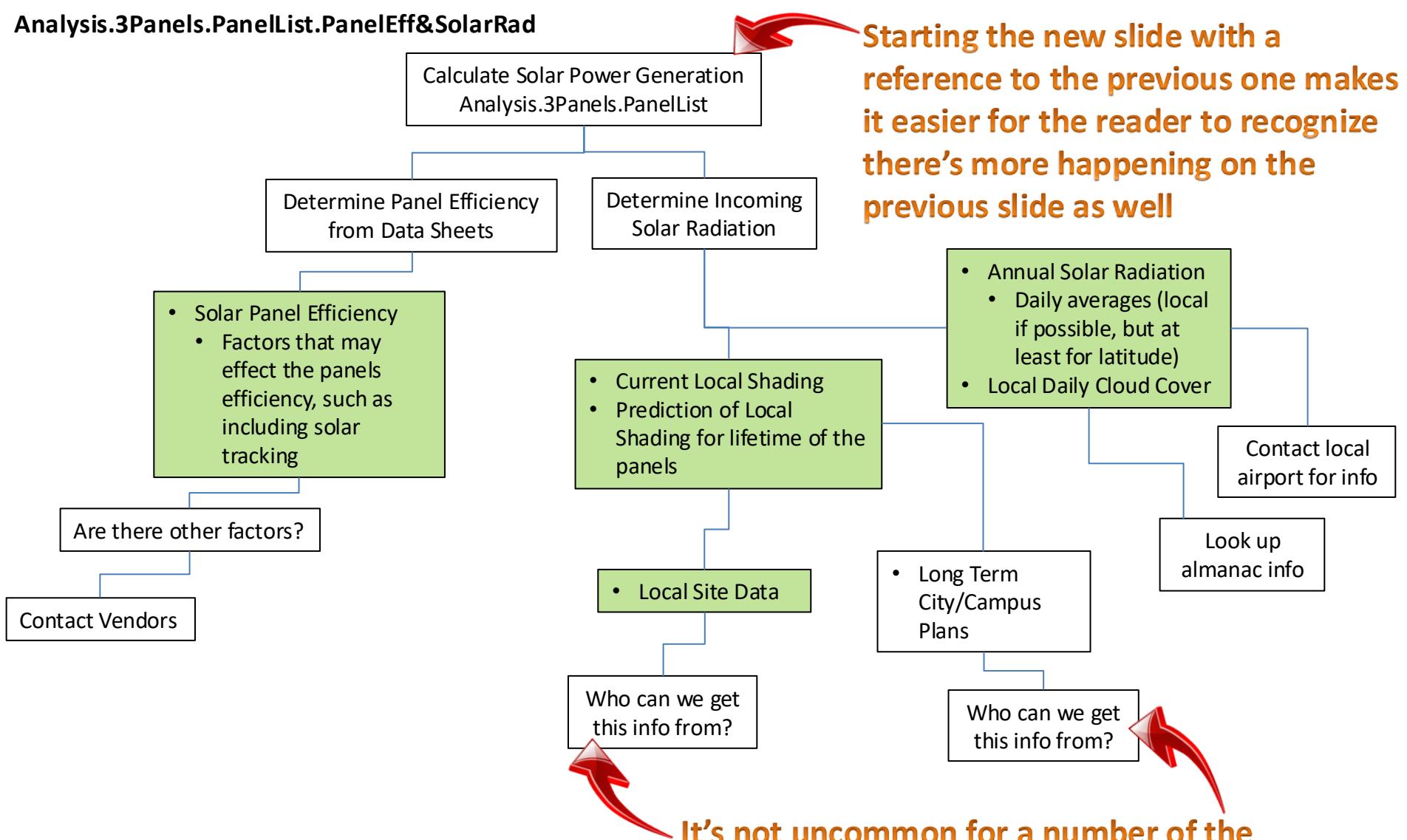
We specified this info already, so say where it's found

Analysis.3Panels.PanelList

There's a tendency sometimes to keep working all the way down a branch and then having to go back up to higher nodes. This is fine but here where when we flush out Calculate Solar Power Generation, we see it's getting crowded quickly. So we'll pull out these items onto a the next slide.



Analysis.3Panels.PanelList.PanelEff&SolarRad



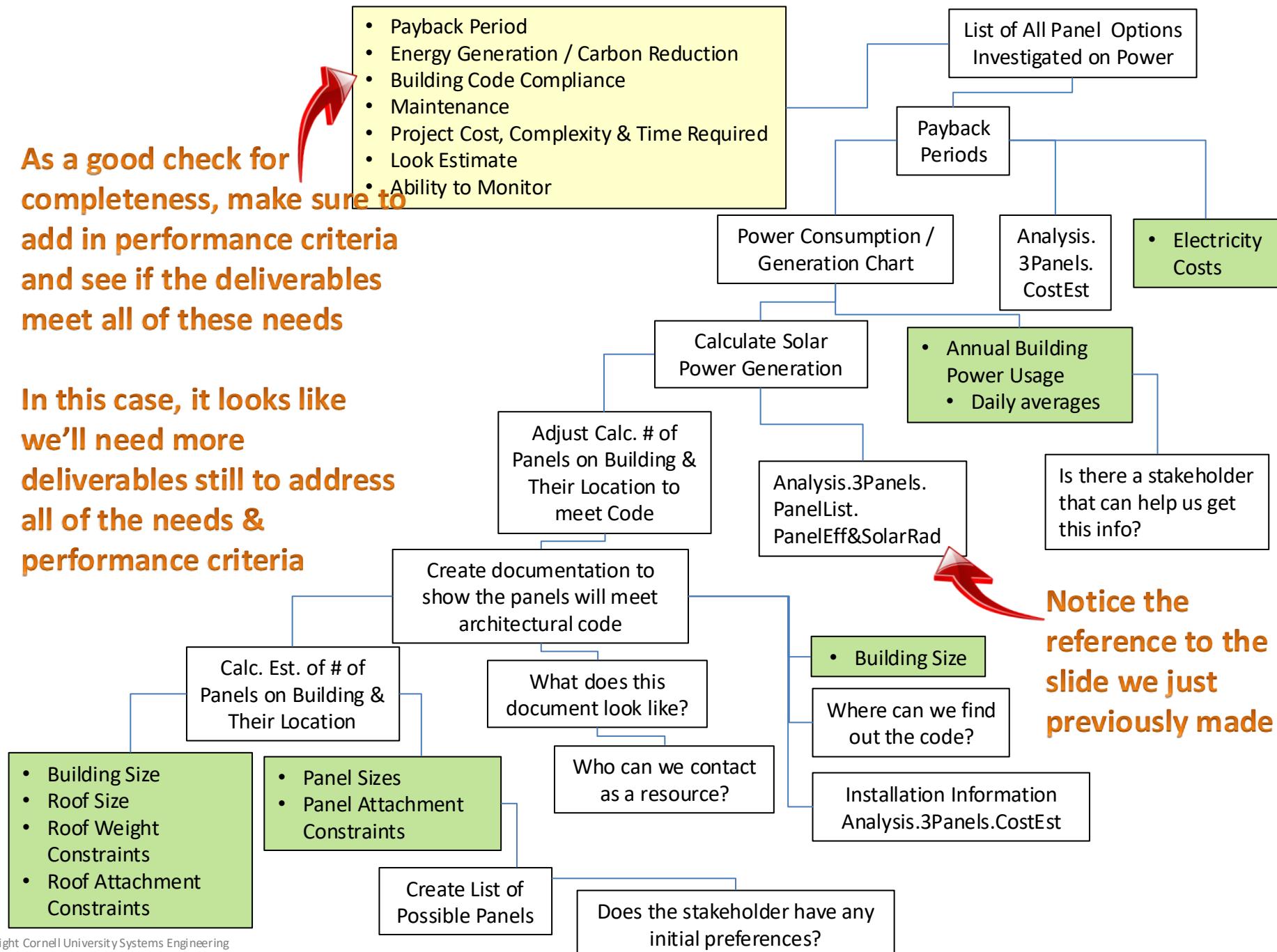
Starting the new slide with a reference to the previous one makes it easier for the reader to recognize there's more happening on the previous slide as well

It's not uncommon for a number of the leaf nodes to be questions about sources of data or simply how to do things.

Analysis.3Panels.PanelList

As a good check for completeness, make sure to add in performance criteria and see if the deliverables meet all of these needs

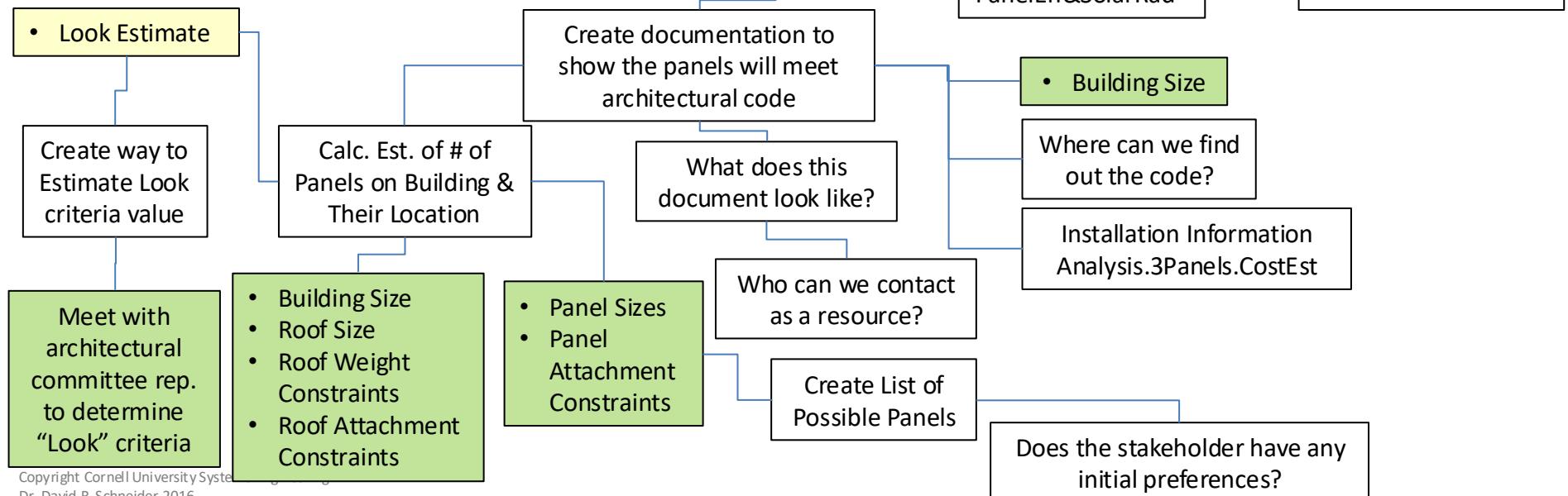
In this case, it looks like we'll need more deliverables still to address all of the needs & performance criteria



Notice the reference to the slide we just previously made

Analysis.3Panels.PanelList

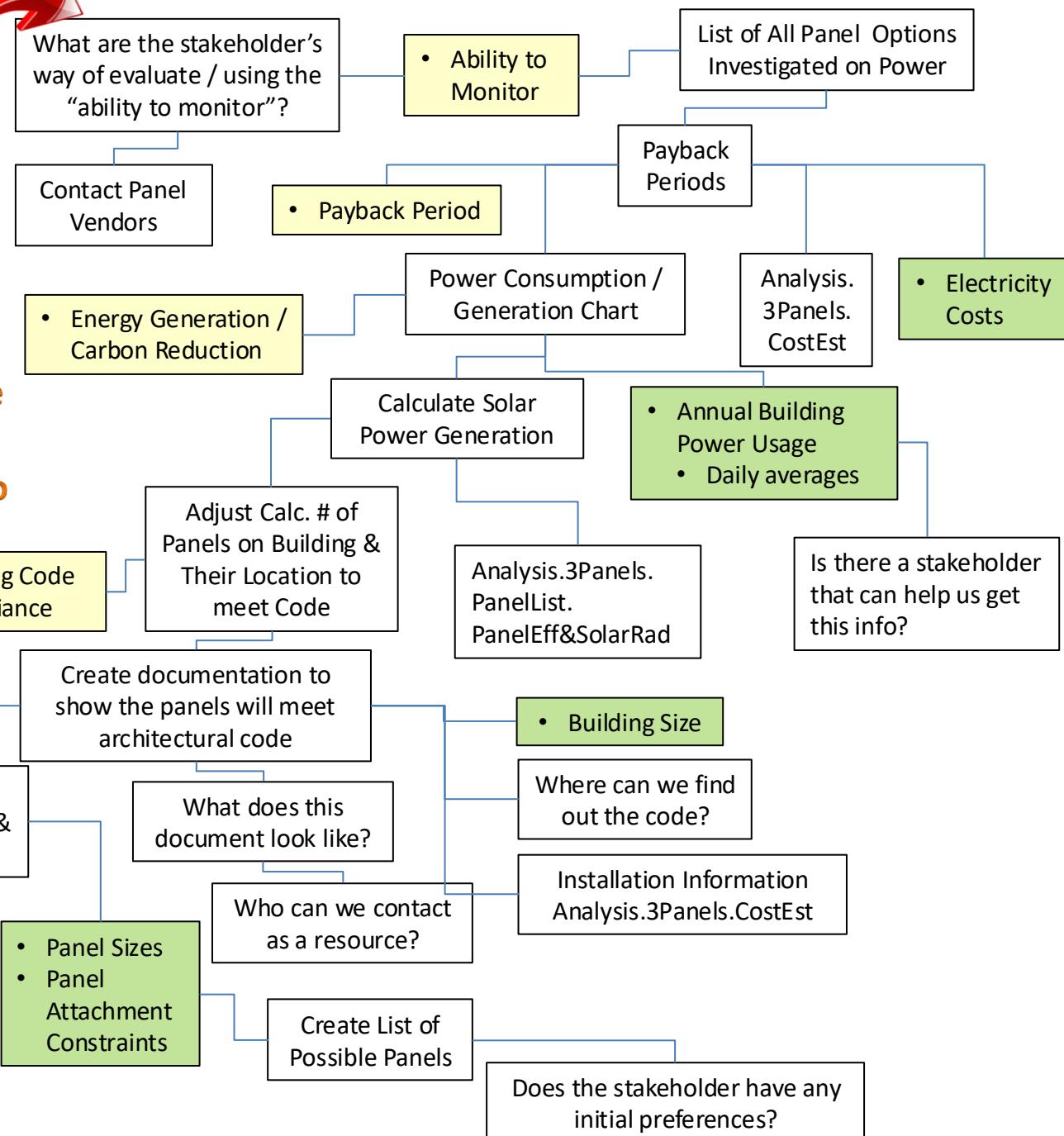
Split up criteria to show where and how soon we can begin to get some values (even estimates) on our performance



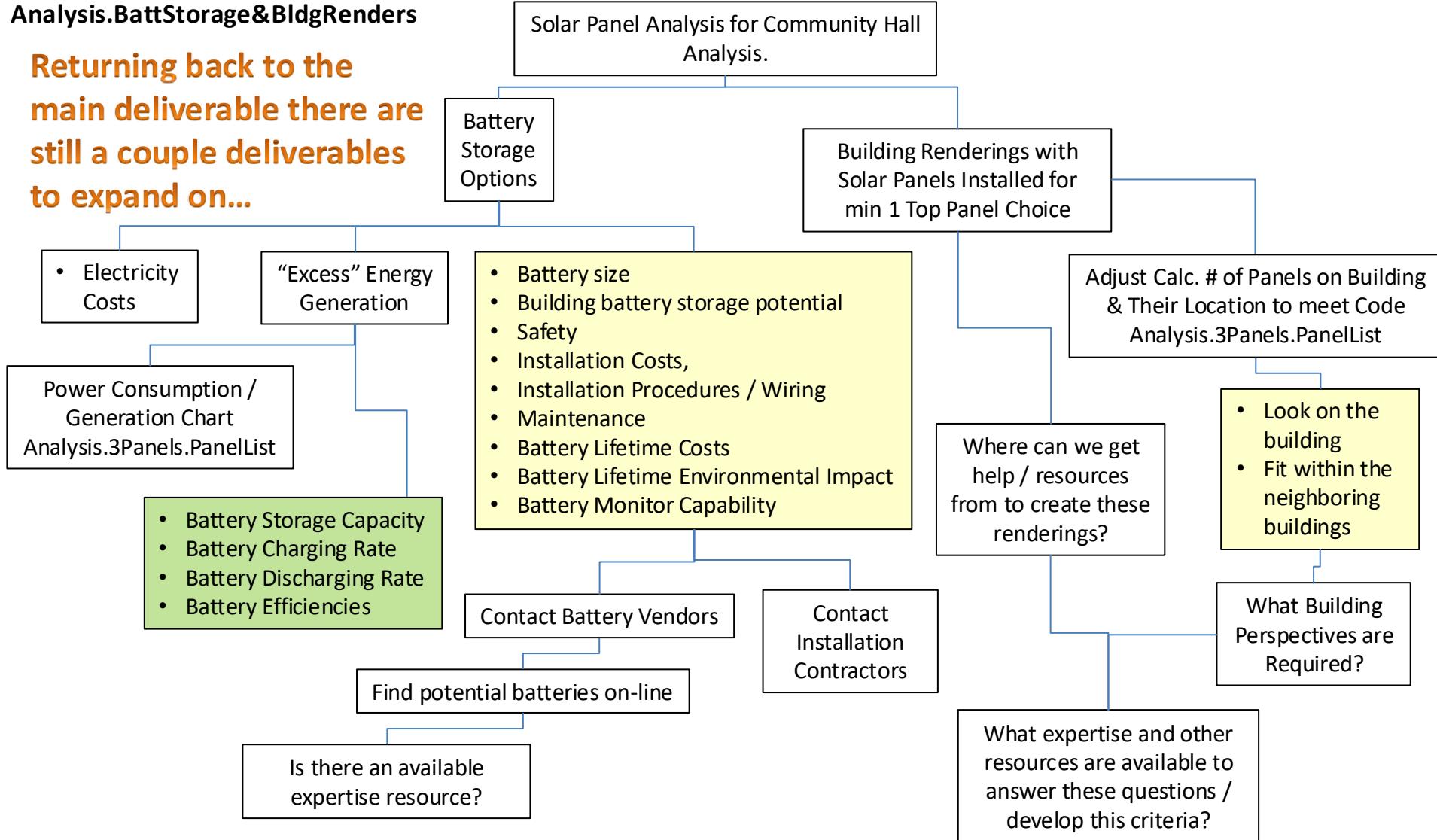
Analysis.3Panels.PanelList

“Ability to Monitor” is still uncertain so until we get more info., we’ll leave it here but we’ll want to get this question answered soon

It’s common to have to create ways to estimate performance mid-way in your work. This kind of feedback is essential to recognize problems / opportunities early on



Returning back to the main deliverable there are still a couple deliverables to expand on...



Analysis.BattStorage&BldgRenders

Solar Panel Analysis for Community Hall Analysis.

Notice the reference to part of a previously developed branch

Battery Storage Options

Building Renderings with Solar Panels Installed for min 1 Top Panel Choice

- Electricity Costs

“Excess” Energy Generation

- Battery size
- Building battery storage potential
- Safety
- Installation Costs,
- Installation Procedures / Wiring
- Maintenance
- Battery Lifetime Costs
- Battery Lifetime Environmental Impact
- Battery Monitor Capability

Power Consumption / Generation Chart
Analysis.3Panels.PanelList

- Battery Storage Capacity
- Battery Charging Rate
- Battery Discharging Rate
- Battery Efficiencies

Adjust Calc. # of Panels on Building & Their Location to meet Code Analysis.3Panels.PanelList

Where can we get help / resources from to create these renderings?

- Look on the building
- Fit within the neighboring buildings

What Building Perspectives are Required?

Contact Battery Vendors

Contact Installation Contractors

Find potential batteries on-line

Is there an available expertise resource?

What expertise and other resources are available to answer these questions / develop this criteria?

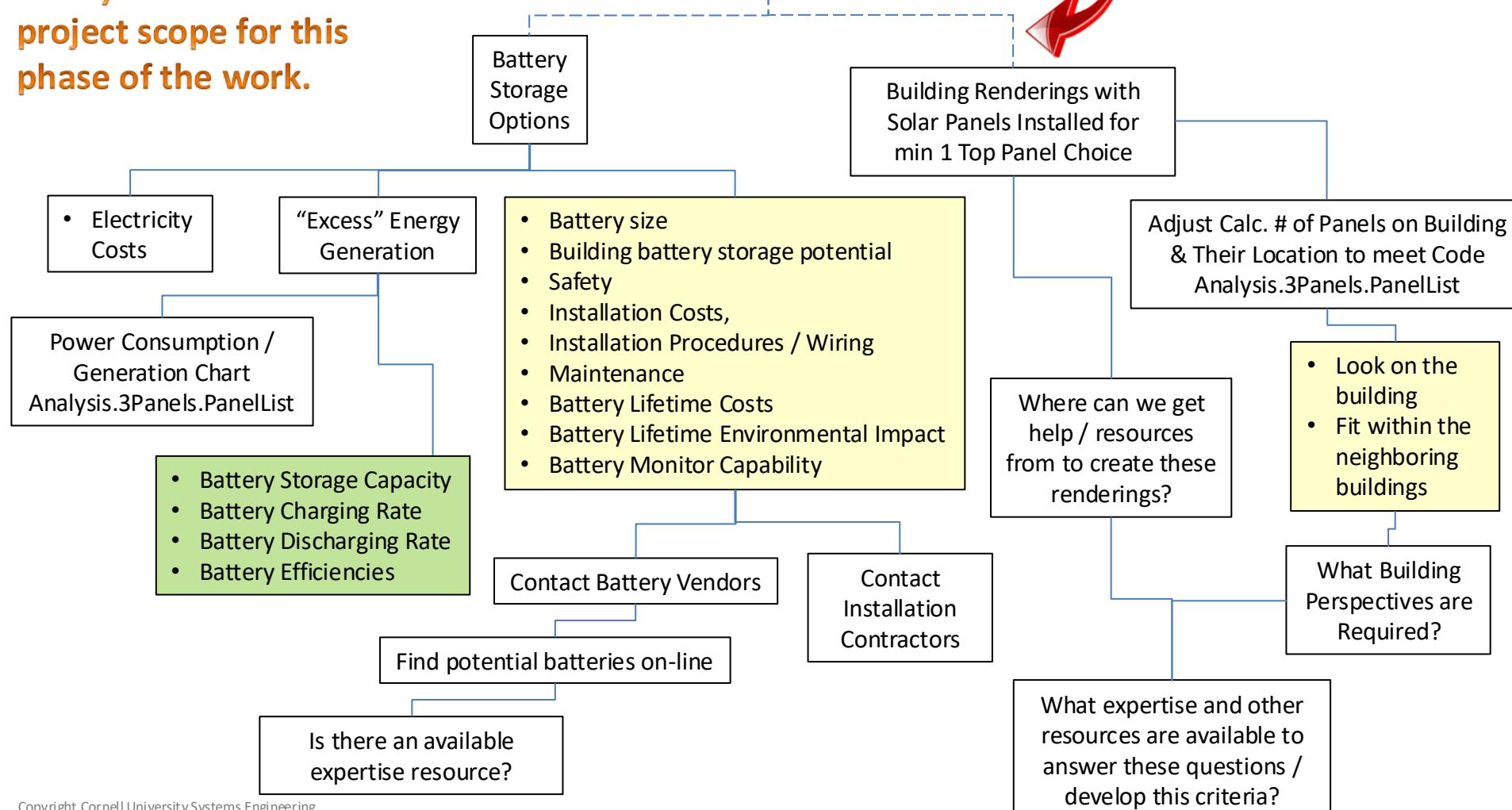


Notice the reference to part of a previously developed branch

Solar Panel Analysis for Community Hall
Analysis.

There seems to be a lot of work and a lot of unknowns for these deliverables. Since they're not as central of a priority for your stakeholder, you can work out an agreement with your stakeholder to cut these from the project scope for this phase of the work.

Notice the dashed line to show these were cut from the scope. Don't throw this away as it may be a good place to start for your next phase.



And now, you're done! Well at least well enough to get started with the next steps of your work, and assigning tasks among team members. Now is a great time to translate all of your slides into a timeline. You may likely find a few more tasks / deliverables, performance criteria, needed data and questions in doing so as you review your work here.

Check out the Timeline Guide on how to create a timeline. There is some overlap in the themes and steps in the timeline guide with what is discussed in this guide, and so you may be able to replace some timeline Steps (such as determining subtasks) with the work that you have already done here.

You could also translate your question tree here to a PERT Chart or you can combine your question tree into one large complete one and possibly color code it as well. Either way, make sure you also read Defining Deliverables and all of its Tips section so you'll create your own question tree as effectively as possible.