

## Labor Overruns Are Costly!

### Understanding labor is the key to estimating accuracy

**What are your thoughts about the range of estimator experience? An Old Hand who goes to office because of physical limitations vs. a Bright Young Guy with great computer skills but minimal time-on-the-job?**

Being an electrical estimator is NOT an entry level position. Just because someone is “computer savvy” doesn’t mean that they are a good candidate for the position of estimator. In addition, just because someone is a good electrician doesn’t necessarily mean that they will be a good estimator. Electrical field experience and software skills are necessary to develop as an estimator. The fundamentals of estimating are necessary to perform in this position. Learning estimating software will not make an individual an estimator no more than learning how to use a hammer and a saw will make you a carpenter.

**Would you adjust productivity on an IBEW job vs. Open Shop? How do you adjust productivity based on percent of journeymen, percent of apprentices and percent of helpers?**

In my experience I believe that labor should be adjusted to the company’s workers skill and ability as well as the project manager’s ability to lead the project for maximum efficiency. Labor units are based on experienced journeymen. The labor class crew allocation will be determined by each company. At this time, I am not aware of a publication that can help with this. Each company MUST study and track labor productivity, train and instruct for better productivity and replace employees with poor performance and those that are untrainable.

**How would I calculate that ratio for my area based on something like that graph?**

Productivity can be difficult to calculate. Study your company’s projects for bidding purposes. Using the established percentages is good but you should also use your own judgment regarding the capability of your own workers.

**Please explain about the productivity of things like: 4 x 12’s vs 5 x 10’s?**

When a project’s schedule is not the standard 5 days a week, 8 hours per day, then labor productivity is affected. Both schedules of 48 work hours and 50 work hours per week will have lost productivity. I do not have any data that compares 4 x 12’s vs. 5 x 10’s, however it is my opinion that the 4 x 12’s would be better for productivity. This schedule would also offer the workers the benefit of a 3-day weekend.

**Where can I find the study for the overtime losses?**

NECA (National Electrical Contractors Association) has publications available for members and non-members. For more information visit their website at <https://www.necanet.org/>

**As a PM, how do you get the workforce to report work based on those labor cost codes?**

Labor cost codes can be determined with software. The cost codes must be placed on a time sheet that each worker or the project foreman fills out. This data must be sent to the office and entered into a software program or Excel sheet, and compared on a regular basis for the estimated labor hours versus the actual labor hours used.

**Is the labor unit listed in NECA for one laborer? If so, do you need to multiply the labor unit by the number of laborers?**

A NECA labor unit is based on the time that it will take to install each piece of material. It may be more than one worker. You do not multiply labor unit. For example, a 2000A switchboard labor unit may be 24 hours. This means that 3 workers would or could install this item in one 8-hour day.

**What is the difference between RS Means and NECA for estimating information?**

I am not an expert on RS Means data, but NECA is only a reference for labor units and labor factors, not costs. I believe that RS Means provide costs for labor and material.

**Is there a factor to apply if we are bidding as a specialty electrical subcontractor working with the project EC?**

I think this would be determined by the competency of the subcontractor. Having a clear scope of work is the key to working with subcontractors.

**Is there a list of "incentives" to keep the labor force motivated to help with advance planning in order to estimate jobs?**

The best incentives are money and time off. Another great incentive is offering a percentage of the profit when the project is completed in less hours than estimated. Most people appreciate a pat on the back from time to time, but most people have financial goals in life that they want to accomplish.

**Please send the link for project labor factors that would have a negative impact on your labor cost.**

To access the link please visit:  
<https://www.electriclestimating101.com/free-downloads/>

**How do I contact you if I want more estimating training?**

Please contact me at: Don Kiper Estimating 101  
Cell: 905-941-1611 or by email at:  
[don@electriclestimating101.com](mailto:don@electriclestimating101.com)

**Are there certain installation labor factors and project labor factors that you would prioritize over others? If we include everything, we would likely price ourselves out when bidding in a union vs. open shop situation.**

Each contractor must determine which factors and percentages to include in their bids. In my experience, I will suggest to you that these factors are not ZERO. Some disagree with published percentages; however, I have no problem with them. What I would like to impress on you is these percentages are with your company. If I could list a few that are high on my list they would be: multi-story buildings, overtime, cold weather, extremely hot weather, project access and location.

**Is the Overtime Productivity chart on your site?**

The Overtime Productivity is not currently on my site. However, I am in the process of completing a book that will be available for purchase soon. Please continue to check my website at:  
<https://www.electriclestimating101.com>

**How do you know if your estimating program has accurate labor units?**

In order to know if your estimating program has accurate labor units you would need to be tracking your own labor productivity. Not all electricians produce at the same rate, therefore, each company must decide what labor units will work for their workers.

**What is the importance of accurate project cost codes with respect to labor factors?**

Project costs codes are for tracking and have nothing to do with labor factors. Labor factors, such as installation or type of project, are there to adjust the labor units and hours to reflect the project conditions.

**Do you have recommendations for how to train our team members to follow these rules? They tend to push back due to additional cost associated with covering these labor increases.**

My recommendation is to invest in training. For more information on my training offering, please visit my website to reach out to me for additional information.

**On the types of project, focus on percentages, you gave us examples on Commercial, Retail and Water Treatment. Do you have examples for Road and Traffic?**

Unfortunately, I do not have examples, however by utilizing the power of ACCUBID software, you could break it down and figure out the percentages of signals, traffic loops, poles, etc.

**You mentioned tracking labor using tracking codes. In ACCUBID, what would be the process to break this down? Can you provide a quick example of how you found this information in ACCUBID?**

This is achieved on the Extension Screen in ACCUBID software using the Grouping feature.

**Do you have a preferred estimating program?**

I have used four major brands of estimating software. There is a myth in the industry that all estimating software does basically the same thing, but this is not true. If someone was purchasing a cordless drill; I would say that that is a brand choice. It really doesn't matter. But when choosing estimating software, several factors should be considered. First, you need to understand that if estimating software is used the way it is intended, an estimator will spend approximately 85% of their time utilizing the software. They will spend 65% of their time performing takeoffs. The best software is the one that provides the best outcome for organization, time efficiency in performing takeoffs, and the ability to accurately create multiple bid summaries. Price should be the last consideration. Estimating software is an investment and contractors should want a return on that investment. A quality, skilled estimator's salary is expensive and maximizing their productivity is key. I prefer Trimble® ACCUBID Classic Pro software. I would purchase ACCUBID in lieu of accepting any other software for free.

## PanelScan FAQs

**How can I sign up to use PanelScan?**

PanelScan functionality within empower is available for customers who have a relationship with ABB.

If you do business with ABB and have access to empower Quote, you will automatically have access to PanelScan.

If you already work with an ABB distributor, we highly encourage you to mention the PanelScan tool to them so they can start using it right away for faster quote creation. The better the quality of panel schedule documents provided to the distributors, the faster it will be processed by PanelScan.

**Would the electrical panel software you demonstrated require a check before using the panel card software by a licensed electrician, as well as after the panel cards are posted?**

Yes. The last step after PanelScan automatically extracts the panel schedules from the uploaded file is the "human proofing", where the quote creator (i.e.: sales engineer or quotation expert) will review the panel cards or extracted panel schedules and accept them all. Here is a video with the step by step process: <https://www.youtube.com/watch?v=4j5l6eaqzbo>

**Can the PanelScan tool presented "read" any type of panel specifications, or does it have to be in a specific format or template?**

PanelScan can read most of the panel schedule formats used by the industry. ABB is continuously adding more panel types based on what they see using artificial intelligence and machine learning algorithms. It is important to mention that if the panel specification is blurry, unclear or handwritten, PanelScan probably won't be able to read them.

**If PanelScan is not able to identify 100% of my job specification, will it still read through the panels it was able to identify, or will the whole document be discarded?**

PanelScan will read and use all of the schedules it can find in the job specification. In the "human proofing" step, you are able to compare the panel schedule read to the input document. If there are any breakers or other information missing, you can point and click to add it on the fly.

## Webinar presenters



**Don Kiper**, President,  
Estimating 101

Don serves as President of Estimating 101, an electrical estimating consulting and training business. With forty-two years' experience in the electrical industry as an electrician, estimator, estimating manager, and project manager, he brings the best practices and outcomes for estimating electrical projects.

In just over three years, Don has provided training for more than 60 contractors and trained more than 170 estimators, project managers and owners. He is a published author of several books on estimating philosophy and Trimble ACCUBID Classic estimating software. He also writes the bi-monthly column "Estimating Essentials" for EC&M magazine. He is a member of ASPE, American Society for Professional Estimators. Don holds a B.S. and a M.Ed.

### **Electrical Estimating 101**

Don Kiper

President

Phone: (905) 941-1611

[www.electriclestimating101.com](http://www.electriclestimating101.com)



**Will Gunn**, Digital Product  
Manager, empower-Quote, ABB

Will Gunn has been the Digital Product Manager for empower-Quote since joining the team in 2015, just as Industrial Solutions was beginning its digital tools transformation; his main focus is continuous improvement of the empower experience.

Panelscan by ABB video:

<https://www.youtube.com/watch?v=4j5l6eqzbo>

<https://electrification.us.abb.com/your-business/contractor>