FORESTRY BY THE NUMBERS

Knowing Your Costs

WCLA Credit Union
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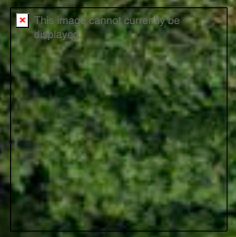


WCLA CU Overview

- Member Owned Cooperative
- $145 Million Total Assets
- Deposits From Timber Industry to Fund Logging Businesses
- Operate Primarily in WA & OR, but also ID, MT, and CA
- Currently a Staff of Nine
- Volunteer Board & Supervisory Committee
  12 Total Volunteers



Knowing your costs

- Everyone should have their way of calculating hourly costs.
  - It shouldn’t be what your neighbor charges just because that’s what he charges
  - How do you know they are even generally correct?!

- We are going to get into some high-level items of this spreadsheet to help YOU do the math.

Knowing your Costs

- Assumptions for the following tables you will see.
  - Hours worked per machine are 2,100 hours per year
  - Hours worked per day are 10 hours
  - Cost per day to drive the pickup is $150/day

Knowing your Costs

- Equipment Expenses go into two different categories
  - Fixed Costs
    - Occur whether the machine runs or not.
    - You need to know roughly how many hours a year the equipment will work in order to know what is needed to cover the fixed costs.
  - Variable Costs
    - Only occur when the machine is running
    - In accounting terms this is the Cost of Goods Sold
  - Operational Overhead
    - Costs that the operation incurs that need to be allocated to hours worked per machine.

Fixed Costs

Equipment Fixed Costs		Annual	Hourly
Equipment Insurance		974	0.46
Employee Insurance		12,000	5.71
Personal Property Tax		9,735	4.64
Financing/Opportunity Cost		40,563	19.32
		63,271	30.13

- These are the costs that occur even when the machine isn't running.
- Financing/Opportunity Cost is the largest hourly cost here.
  - It is the cost to finance the machine.
  - Or
  - Lost opportunity cost of using your own money to purchase it.

Variable Costs

Equipment Variable Costs		Annual	Hourly
Fuel		117,600	56.00
Lube		11,760	5.60
Operator Wage		80,000	38.10
L&I		6,138	2.92
Payroll Taxes/unemployment		8,000	3.81
Sick Leave		3,200	1.52
Retirement		2,400	1.14
Parts and Repairs		40,000	19.05
Pickup Expense		31,500	15.00
Travel and Meals		-	-
Equipment Depletion/Replacement Cost		89,800	42.76
B&O Taxes		1,470	0.70
		391,868	186.60

- These are the costs that are incurred when the equipment is running
- The four largest “cash costs” are
  - Fuel
  - Wages
  - Repairs
  - Pickup Expense
- Equipment Depletion
  - Everything wears out and needs to be replaced.
  - You just don’t “pay” until it is time to upgrade.

Operational Overhead

Operational Overhead			
Shop Rent		50,000	1.67
Bookkeeper		40,000	1.33
Legal and Accounting		10,000	0.33
Owner's Wage		130,000	4.33
Dues & Subscriptions		5,000	0.17
Advertising		2,500	0.08
Conference Attendance		10,000	0.33
Office Supplies		1,000	0.03
Mobilization		150,000	5.00
Other			-
	Total	398,500	13.28

- These are the operational costs that need to be allocated on an hourly basis.
- These calculations are using 30,000 hours per year of equipment operation.
  - Owner’s wage is the second biggest number
    - This is only filled in if the owner doesn’t run a piece of equipment.
  - Mobilization
    - Moving to the next job costs money, even if you have your own lowboy.
    - Bookkeeper – I have never heard someone say they became a logger to do paperwork!

Check out the Math Cells

Hours worked per year:	2,100
Hours worked per day:	10
Days Worked per year:	210
Acquisition Cost	649,000
Sales Tax	-
Total Acquistion Cost	649,000
Residual Value	200,000
Depletable Value	449,000
Hours until traded or sold	10,500
Hourly depletion rate	42.76
Depletion per year	89,800
Depletion per month	7,483
Monthly payment	11,300
Monthly difference between depletion rate and payment	3,817
Hourly difference	21.81
Machine Market Value	649,000
Market Interest Rate	6.25%
Monthly Medical Insurance	1,000
L&I Rate	2.9229
SS Medicare unemployment	10%
Sick Leave	4%
Retirement	3%
Gallons Per hour	8
Cost of Diesel	7.00
Pickup Cost Per day	150
Personal Property Tax Rate	1.50%
Logging B&O Tax Rate	0.35%
Equipment Insurance Rate per $1,000 of value	$ 1.50
Total Hours worked for all equipment owned	30,000

So how much does the price fuel and fuel burn really affect my operational costs?!

	Hourly		
Gallons Per hour	4	7	10
Cost of Diesel	$7.00	$7.00	$7.00
Cost of Fuel/Hour	$28.00	$49.00	$70.00
Gallons Per hour	4	7	10
Cost of Diesel	$4.50	$4.50	$4.50
Cost of Fuel/Hour	$18.00	$31.50	$45.00

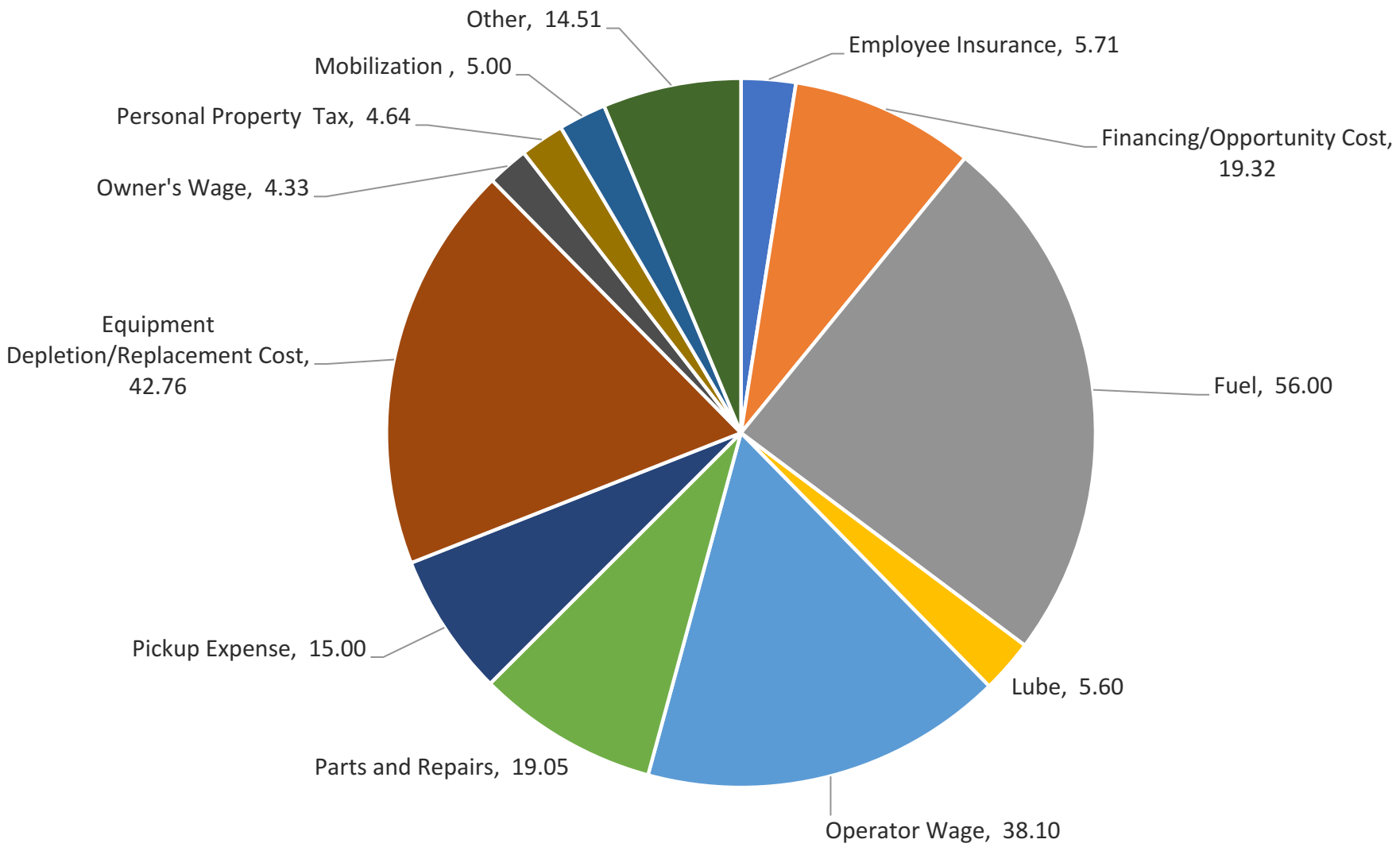
- The top of the table is using $7/gallon diesel, the bottom is using $4.50/gallon diesel.
- At a 4 gallon/hour burn the difference is $10/hour.
  - Maybe a 5-7% hourly cost increase
- At a 10 gallon/hour burn the different is $25/hour.
  - Probably a 12/15% hourly cost increase

The Cost of Being a Pickup Manager

Operational Hours	Salary	Hourly Cost
10,000	$130,000	$13/hour
30,000	$130,000	$4.33/hour
50,000	$130,000	$2.60/hour
10,000	$180,000	$18/hour
30,000	$180,000	$6/hour
50,000	$180,000	$3.60/hour

- If you are no longer in a seat running a piece of equipment, what does that cost per hour
- Income has to come from somewhere.
  - What has to be added per hour to generate that wage.
- Can this hourly cost be added to each machine and still keep you competitive in the marketplace?
  - How much scale do you need to make it work?

The Pie of Hourly Costs



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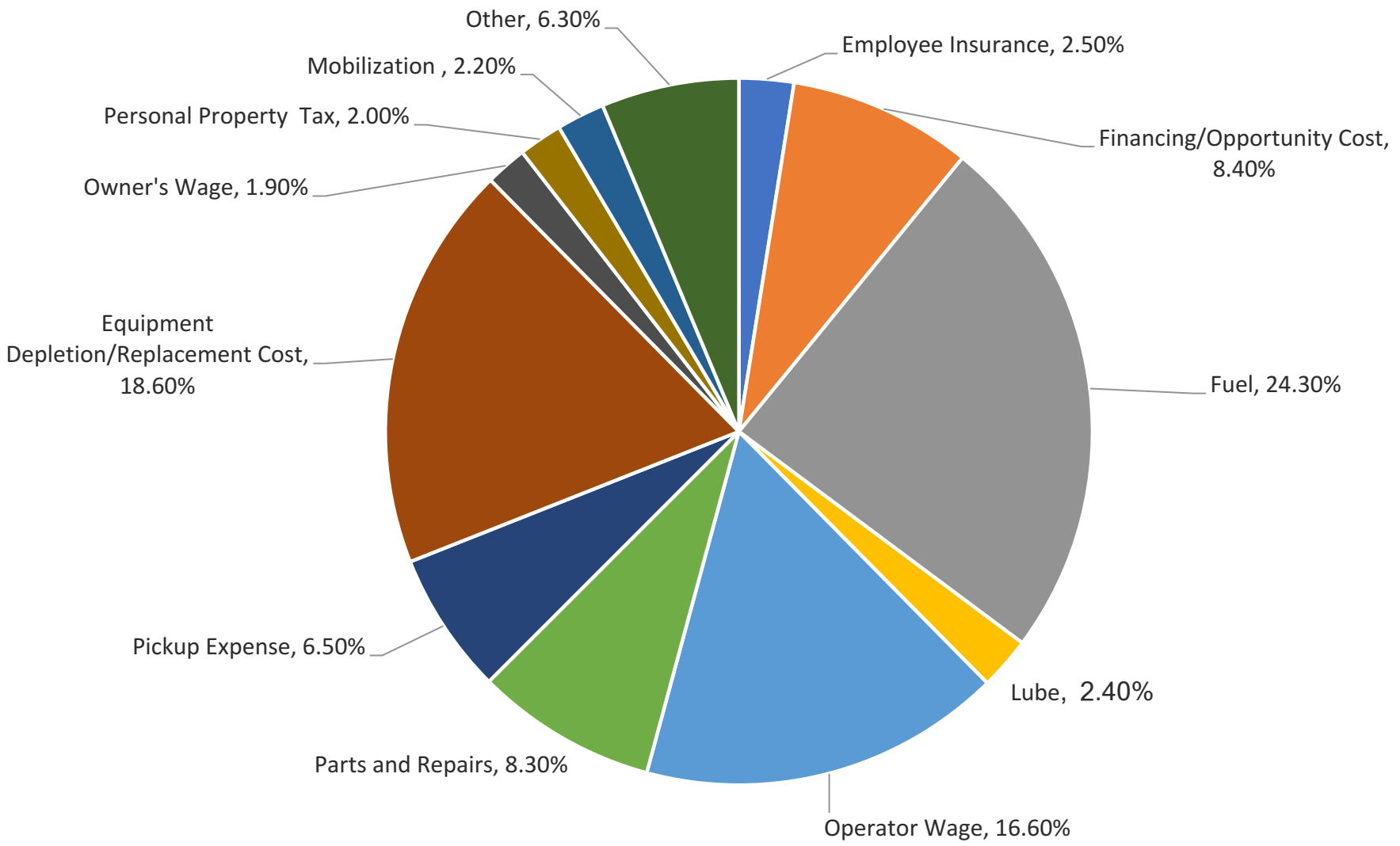

Hourly Cost

Hourly Cost	$230.02
Enough profit to pay Income Tax	
Enough profit to cover rest of Payment	$21.81
Profit%	
What you charge	$251.87

- Hourly cost of this example is $252/hour just to cover operating costs and factoring no additional profit.
  - Hard hourly cost is $230.02/hour.
  - Another $21.81/hour to cover the payment.
- You also need to factor in additional profit to cover taxes and have cash on hand for any other unforeseen expenses.

Wrapping up

- This is not a proprietary form, if you want it, you can have it and use it.
- There is also a workbook for Log Trucks and Cable Logging, just didn’t show them today.
- This form will help you get an hourly rate per machine
  - It is still up to you to know how many tons/mbf you are going to cut, yard, process and load in an hour to bid the job correctly.



Questions

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