BUILDING HOURLY RATES

The BC Wildfire Service (BCWS) Equipment Rates are developed by collecting real cost data from equipment manufacturers and contractors that use the equipment. Costs are split into two categories – fixed costs and variable costs. Fixed costs are the costs of owning equipment whether it is working or not and include things like the cost to purchase the equipment, financing, and insurance. Variable costs are costs only incurred while the equipment is used such as fuel, operator wages, and repairs and maintenance.

The equipment hourly rates are calculated using later model equipment (model year within the last 10 years) rigged out for forestry operations in a production environment. The underlying assumption is that the equipment is maintained according to a reasonable preventative maintenance program, that there is sufficient work to utilize the machine over its efficient useful life, there is a high annual utilization rate, and older equipment is replaced with newer equipment to maximize utilization uptime. The lower capital return required on older equipment is typically offset by reduced availability and increased repair and maintenance costs. A terminal model year and older hourly rate has been established for most equipment.

The BCWS Equipment Rates consider the most practical commercial circumstances to reasonably reflect the operating environment and circumstances working for BCWS.

FIXED COSTS

The cost to purchase equipment is depreciated over the efficient useful life of a machine with a recovery for the salvage value when sold. The cost of financing the equipment is calculated according to typical financing amortizations. The cost to insure the equipment every year is calculated using the typical production hours of the equipment.

Fixed Cost Example

Assume a piece of equipment has a 10,000 hour estimated efficient useful life, five year term financing, and a 2,000 hour per year usage. The purchase cost, less the salvage value after 10,000 hours, would be divided by the 10,000 hours. In this example, the five year cost of financing would also be divided by the 10,000 hours. The cost of insurance would be divided by the 2,000 hours per year. Together, these three costs become the hourly ownership cost.

VARIABLE COSTS

Fuel is calculated using the equipment class fuel consumption in litres per hour multiplied by the average fuel price per litre of the British Columbia rack rates (Kamloops, Nanaimo, and Prince George) plus applicable taxes depending on dyed or clear usage. Fuel and lubricants (including DEF in newer machines) costs are presented separately as the Market Fuel Adjustment and is updated monthly to reflect the changes in fuel costs using the average of the prior month rack rates in B.C. It includes all applicable taxes, except GST, based on application for clear and marked fuel. The Market Fuel Adjustment is added to the All Found Rate to determine the total rate paid for the equipment.

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Equipment Operator Rate includes a base wage, overtime, and typical payroll loading costs to employers (ie. Statutory holidays, vacation entitlement, sick day entitlement, Canada Pension Plan, Employment Insurance, WorkSafeBC premiums, Employer Health Tax, extended medical benefits, and pension contributions).

Repairs and maintenance, including major component repairs and tire (wheeled equipment) and undercarriage (tracked equipment) replacements are calculated over the efficient useful life of the equipment to fully capture the full life cycle of repairs and maintenance costs. Repairs and maintenance considers the parts and labour associated with a typical preventative maintenance program. The efficient useful lifetime repairs and maintenance costs are divided by the equipment's efficient useful life hours to determine hourly repairs and maintenance.

Variable Cost Example

Using the same equipment in the fixed cost example of 10,000 hours efficient useful life and 2,000 annual operating hours, the variable costs are incurred only when a piece of equipment is operating. If a machine consumes 25 litres of fuel per hour and the average rack rate plus applicable taxes cost of fuel is $2.00

per litre, the fuel cost could be $50.00 per hour. The full annual cost to the employer, with all payroll burden, of the equipment operator is divided by the 2,000 annual operating hours. The full cost of repairs and maintenance over the efficient useful lifetime is divided by the 10,000 efficient useful life hours. Together, these three costs become the hourly operating cost.

OVERHEAD COSTS

Overhead, sometime referred to as Selling, General, and Administrative Expenses (SG&A), represent the more general expenses necessary for a business to operate. These are costs such as accounting, legal, office staff, management, supervision, general liability insurance, rent, utilities, non-equipment supplies, training, safety programs and certifications, and other costs not counted in the equipment fixed and variable costs that must be incurred by an operating business.

Overhead Cost Example

Using the same equipment in the fixed cost example of 2,000 annual operating hours, the annual overhead costs of a business are divided by the 2,000 annual operating hours.

PROFIT

Every business must have the opportunity to generate a profit to justify the risk associated with investing capital and operating the business. An appropriate profit margin is calculated and added to the fixed, variable, and overhead costs and included in the All Found Rate

REFERENCE MODELS

Each hourly rate is associated with Reference Models to provide a comparable indication of a typical machine that would fit within the machine class. The Reference Models are not intended to be all encompassing but rather examples to compare against. When determining the appropriate comparable rate for equipment, use the weight and horsepower ratings for classification.