EV Forecast Equation Variable Breakdown

- Average Session Length
    - 3hrs, Ideal, likely 8hr
        - Source
- Energy Per Session
    - kW = 7 to accommodate older models as well as new
    - Average Session Length x kW
    - 3 x 7 = 21kWh
        - Source1, 240V at 15 - 80amp range
- Session per vehicle per week
    - Average city driving EV drives approx 40km a day
    - Can be recharged in less than 2hrs
    - Charging 3-4 times per week for 3hrs should cover the average city driver with 4 sessions being plenty
        - Source2
- Effective hours per day
    - With downtime, repairs and nighttime lows factored in the average charger should be available for 16 realistic effective hours
- Sessions per port per day
    - 16 hours / 3hr sessions = 5.3 sessions per day
    - Sessions per port per week 5.3 x 7 = 37.1
- price per kWh to user
    - approx $0.30/kWh
        - Source3
- Operator cost per kWh
    - Approx $0.20/kWh (High End)
        - Source4
- Charger efficiency
    - 90%
    - Source5

- Cost of install per port
    - $8000
    - Varies alot due to:
        - labour
        - Electrical upgrades
        - Location of charger
        - Could be lower with government programs
    - Source6
- Monthly maintenance per port
    - $33 per month, roughly $400 annually
    - Source7
    - Source8
- Peak load cost per month
    - Power x Demand charge per month
    - 7kW x $14 per month
    - $98 per month per charger